SQT

THE NIMBUS 5 DATA CATALOG

VOLUME 6

1 OCTOBER 1973 THROUGH 30 NOVEMBER 1973
DATA ORBITS 3943 THROUGH 4761



GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND

THE NIMBUS 5 DATA CATALOG

Volume 6

1 October 1973 through 30 November 1973
Data Orbits 3943 through 4761

Prepared by

Allied Research Associates, Inc.
Baltimore, Maryland

For the

ERTS/Nimbus Project

April 1974

GODDARD SPACE FLIGHT CENTER
Greenbelt, Maryland

FOREWORD

This is the sixth volume of a series of catalogs published by the National Aeronautics and Space Administration to document data acquired from the Nimbus 5 meteorological satellite. This volume covers the period from 1 October 1973 through 30 November 1973 with subsequent catalogs to contain documentation for succeeding periods throughout the useful lifetime of Nimbus 5.

Background information concerning the Nimbus 5 meteorological satellite system and a description of the experiments and data formats have been published separately in The Nimbus 5 User's Guide, with post-launch User's Guide information changes and corrections included in the data catalogs. The Nimbus 5 catalogs present the type of data available, anomalies in the data, if any, and geographic location and time of the data.

The assembly and editing of this catalog was accomplished by Allied Research Associates, Inc. (ARA), Baltimore, Maryland, under contract number NAS 5-21617 with the Goddard Space Flight Center, NASA, Greenbelt, Maryland.

J. Sargent
Project Manager
ERTS/Nimbus Project
Goddard Space Flight Center

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SECTION 1

SUMMARY OF OPERATIONS

1.1 Introduction

Nimbus 5 was successfully launched from the Western Test Range at Vandenberg AFB, California, into a near circular orbit (1089 km × 1102 km) at 07 hr. 56 min. 00 sec. GMT on 11 December 1972. All experiments and subsystems were successfully turned on. Satellite operations from launch (11 December) through orbit 103 (18 December) consisted of engineering evaluation of all spacecraft systems. Therefore, data reception, accountability, and processing were intermittent during that period. Table 1-1 is a summary of the documentation for each Nimbus 5 Data Catalog volume through volume 6.

Table 1-1

Nimbus 5 Catalog Documentation Summary

Volume	Coverage Dates	Orbits
1	19 Dec. 72 - 31 Jan. 73	104 - 693
2	1 Feb. 73 - 31 Mar. 73	694 - 1485
3	1 Apr. 73 - 31 May 73	1486 - 2304
4	1 June 73 - 31 July 73	2305 - 3123
5	1 Aug. 73 - 30 Sept. 73	3124 - 3942
6	1 Oct. 73 - 30 Nov. 73	3943 - 4761

The total operating time for each experiment from launch through orbit 4761 was as follows:

ESMR	7,298 hours	
ITPR	7,301 hours	
NEMS	7,304 hours	
SCR	7,301 hours	
THIR	7,304 hours	
SCMR: direct	29 hours	(No usable SCMR data
recorded	6 hours	was recorded after orbit 320.)

The spacecraft attitude in pitch was biased between +2.9 and +3.5 degrees throughout this catalog period. Table 1-2 shows when each was used. Previous volumes discuss the displacement of earth location points caused by the pitch bias.

Table 1-2

Nimbus 5 Pitch Bias History
From Orbit 3943 (1 October 1973) Through Orbit 4761 (30 November 1973)

Date	Orbit	+2.9°	+3.5°
1 October	3943	x	
4 November	4407		x
6 November	4435	x	
17 November	4576		x
19 November	4601	x	
22 November	4648		x
24 November	4679	x	
29 November	4743		x
30 November	4761		x

The nadir location coordinates on ESMR, ITPR, SCR and NEMS tapes are adjusted to correct for the pitch bias. Grid points on THIR and ESMR images are routinely corrected to match the data points and the grids. Any grid that is still in error by more than 60 n. m. is identified in Table 2-2 under the column headed "Grid Correction." THIR and ESMR grid print maps, available through NSSDC, are also adjusted so that the data points and their coordinates match.

Roll and yaw attitude control have been within nominal limits during this period.

Data quality from both HDRSS recorders continues to be good. However, since June, the amplitude of the flutter on HDRSS A has been twice that of HDRSS B. Thus, HDRSS A use is restricted to one orbit per day during the blind period when two tape recorders are required for global coverage.

The power, command/clock, Versatile Information Processor (VIP), and thermal subsystem performances continued to be satisfactory during this period.

Subsections 1.2 through 1.7 of this catalog summarize the operational highlights of the individual experiments and call attention to known data anomalies. Section 2 lists the time for which data was received and is available for study for each experiment. Sections 3 and 4 show ESMR and THIR imagery, while Section 5 presents corrections to The Nimbus 5 User's Guide.

The user is referred to The Nimbus 5 User's Guide for a complete description of each experiment and to Section 1.7 of that Guide for the requesting procedure and sources for all data. Sections 2, 3, and 4 of this Data Catalog should help the user to select data to meet his needs.

1.2 The Temperature Humidity Infrared Radiometer (THIR) Subsystem

The quality of THIR data from both channels has been good. Root mean square (rms) THIR temperature variations, due to HDRSS tape recorder and system noise, are near 2.4°K for HDRSS B and 3.6°K for HDRSS A. The higher HDRSS A value is attributed to higher flutter in its recorder system.

1.3 The Surface Composition Mapping Radiometer (SCMR) Experiment

The SCMR experiment collected and returned approximately 35 hours of instrument data during the first 320 orbits. Intermittent loss of a scan mirror synchronization pulse caused a loss of useful data output whenever this occurred. This synchronization problem progressed to the point where no useful data could be obtained after orbit 320 (4 January 1973).

Users who desire SCMR data or information should write to Dr. Warren G. Hovis, Code 940, Goddard Space Flight Center, Greenbelt, Maryland 20771.

1.4 The Electrically Scanning Microwave Radiometer (ESMR) Experiment

1.4.1 Performance

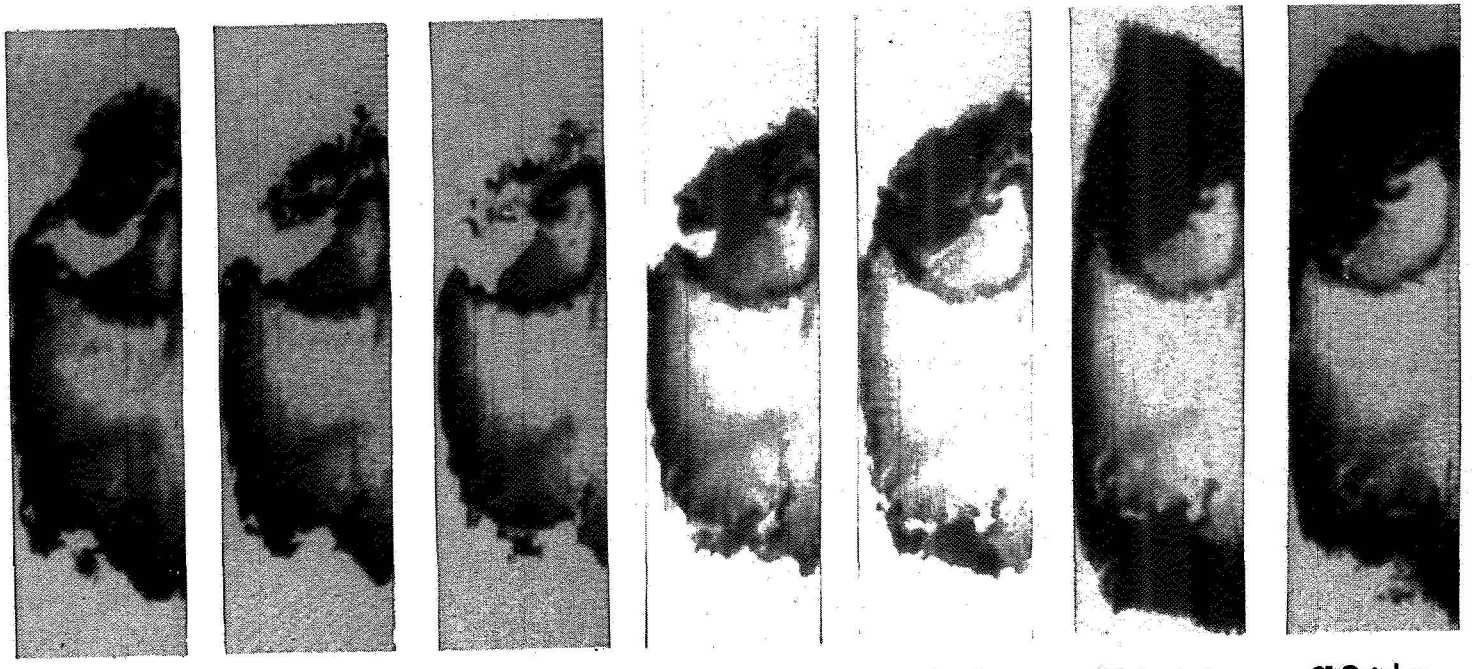
The ESMR instrument performance during this period has been satisfactory, although there were times, as shown in Table 3-2 in Section 3, when the instrument operated in a reduced data output mode.

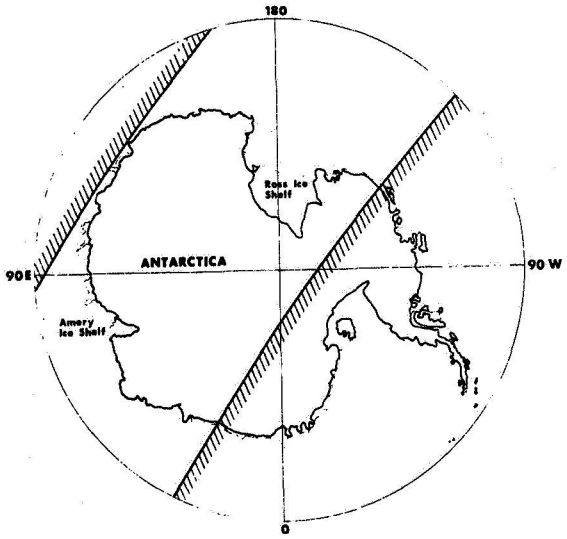
In the reduced data output level mode the instrument brightness temperature response range is between 110°K and 220°K. Its normal response range is between 110°K and about 300°K. Thus, the effect of the malfunction is to narrow the range to which the instrument can respond. There is no way to recover temperature data above 220°K. However, by applying offset corrections, temperature values below 220°K are considered to be accurate to within 10°K. Because many polar and atmospheric phenomena have brightness temperature lower than 220°K, investigations of these phenomena will be only slightly affected by the loss of high brightness temperatures.

On the ESMR image displays (Section 3) the effect of the temperature offset is to completely eliminate data information in swath 3, since its entire display temperature range, 254°K to 290°K, is above the new upper limit. Swath 2 temperature values range from 194°K to 266°K; thus, those values above 220°K are not shown at their true temperature. The offset does not affect values of swath 1, as its temperature limits are 110°K and 200°K.

A semi-quantitive calibration algorithm has been developed for these offset data. These calibrated data, as well as the normal data, are available through NSSDC as described in The Nimbus 5 User's Guide.

Figure 1-1 presents a time-lapse sequence of ESMR images of Antarctic ice changes. The images also present a month-to-month comparison of the image quality.





Through daily, repetitive observations, the Nimbus 5 Electrically Scanning Microwave Radiometer (ESMR) records changes in amount and location of the Antarctic sea ice. In these images sea ice has the warmest (darkest) microwave brightness temperatures.

These images of ice conditions are extremely useful to the U. S. Navy for resupply routing and are valuable to help understand sea ice dynamics around Antarctica.

Figure 1-1 ESMR Observations of Antarctic Sea Ice Changes during 1973

1.4.2 ESMR False Color Images

Several computer-processed color images (8" × 10" size) have been produced. Each image is a composite of several consecutive orbits of data. Table 1-3 lists those available through NSSDC. Volume 2 shows two examples (in black and white) of these false color composites. The user is cautioned that several of the South Polar images have longitude grid labels that are incorrect by 180°. Obvious terrestrial features can be used to obtain the correct grid orientation.

Table 1-3

ESMR Color Images from Launch Through 30 November 1973
Available at NSSDC

Projection: Polar Area: 60°N - 90°N	Projection: Polar Area: 60°S - 90°S	Projection: Mercator	
Date	Date	Area	Date
15 December 1972	15 December 1972	180°W-180°E	12 Jan. 1973
24 December	24 December	60°S - 60°N	
2 January 1973	11 January 1973	130°E-110°W	13 Jan.
11 January	21 January	50°S - 50°N	
30 January	30 January	20°E - 40°E	13 Jan.
10 February	10 February	10°N - 40°N	
26 February	26 February	130°E-110°W	14 Jan.
21 June	4 March	50°S - 50°N	
1 July	15 March	60°E-150°E	14 Jan.
21 July	26 March	0° - 60°N	
30 July	4 June	20°W-60°E	18 Jan.
8 September	21 June	0° - 75°N	
27 November	1 July	60°W-130°W	23 Jan.
	11 July	10°N - 60°N	
	21 July	60°E-150°E	10 Feb.
	30 July	0° - 60°N	
	30 August		
	5 September		
	28 September		
	27 November		

1.5 The Infrared Temperature Profile Radiometer (ITPR) Experiment

The ITPR instrument operated in both the nadir and scan modes during this period. In both modes, sensor outputs from all seven channels have been normal. Frequently, when in the scan mode, the mirror would hang up, resulting in the loss of scan coverage. Orbits, and portions of orbits, with good data in the scan mode are listed in Table 1-4.

Table 1-4

Orbits with ITPR Scan Mode Data for October and November 1973

Date	Orbits	Percent of Total Coverage in the Scan Mode
10/10	4072-4074	7%
10/11	4079, 4080, 4086	8%
10/12	4100	9%
10/14	4126	9%
10/15	4132	20%
11/09	4476	9%
11/16	4570	10%

Instrument calibration values have remained almost constant during this period. Table 5-4 through 5-7 in Section 5 of this catalog give calibration values for pervious periods.

1.6 The Selective Chopper Radiometer (SCR) Experiment*

1.6.1 Instrument Performance

The SCR instrument has remained in the normal operating mode since shortly after launch. Useful data continues to be received from all A, B, and C channels, although there was a sudden decrease in A channel gains and offsets, first observed during orbit 4294 (27 October). The D channels, when in high gain, have been affected by noise since orbit 3124 (1 August). The high-gain D-channel data became unusable on 13 August. Between 17 and 21 September it was again, usable, but since 21 September it has been unusable. The problem is attributed to faulty relay contacts.

The SCR data is transmitted daily from Goddard Space Flight Center to the experimenter at Oxford, England. After processing and calibration, the data is output in several forms for analysis. Section 1.6.2 presents analysis of some of the data for August and September.

1.6.2 Data Analysis for August and September 1973

Interest in stratospheric data has centered on the Soutern Hemisphere which was recovering from winter during August and September. Unlike the change from summer to winter when polar area temperatures decrease fairly uniformly, the reverse transition normally follows a pattern with bursts of eddy activity and rapid increases of polar temperature, sometimes followed by equally large decreases a few days later (e. g. see Labitzke & Barnett, Journal Geophysical Research, vol. 78, January 1973,

*Contributed by J. J. Barnett, University of Oxford, Oxford, England

pp. 483-495). Nimbus 4 SCR results showed that in the Southern Hemisphere these sudden warmings are never as large as the largest observed in the Northern Hemisphere. Major mid-winter warmings (when zonal mean flow becomes easterly), as occurred between 4-10 January 1971 in the Northern Hemisphere, probably do not occur in the Southern Hemisphere. In the lower stratosphere polar temperatures are much lower in the Southern Hemisphere winter than in the Northern Hemisphere winter, while corresponding temperatures in the upper stratosphere are similar (although comparison must be made with caution because of the variation due to warmings). However, the hemispheres differ at upper stratosphere levels in their pattern of temperature increase during late winter and spring. In the Northern Hemisphere, mid and high latitude temperatures increase in unison, with mid-latitude temperatures staying between those of the pole and the tropics. But in the Southern Hemisphere, mid-latitude (45° - 65°S) temperatures increase much more slowly than polar temperatures, giving a reverse temperature gradient south of about 60°S after July, with the pole area hotter than the mid-latitudes. These hemispheric differences in the stratosphere are presumed to be caused by surface differences, probably by differences in planetary wave excitation due to different mountain range configurations or different ocean temperature variations.

Figure 1-2 shows the standard deviation of SCR radiance from the zonal mean 64°S latitude circle as a function of time. Channels B12, B23, B34, and B4 measure emission from the stratosphere (their weighting functions peak at 1.5, 4.2, 8, and 60 mb respectively), while A2 and A3 measure emission from near the tropopause and in the troposphere (peaks near 110 and 450 mb). Channel A1 is omitted since its weighting function peaks close to that of B4. The standard deviation is taken as a measure of wave activity. Between A3 and B34 levels the standard deviation increased with height at most times during August and September. This is quite consistent with the theory of upward propagating waves forced from the troposphere since the decreasing air density implies that amplitude must increase with height if the wave is not attenuated. However, standard deviations appear to decrease slightly above B34 levels. This is a significant observation since it implies attenuation of the wave in the upper stratosphere near B12 and B23 levels, and suggests that amplitudes may decrease through the mesosphere.

Greatest wave activity in the Southern Hemisphere occurred near 15 August (day 227). Figures 1-3, 1-4, and 1-5 are maps for that day. The pattern was clearly wave number one on channel B34, but on channel B12 it was less symmetrical, with the hot and cold centers about 100° longitude apart. Thus, the channel B12 pattern contained a substantial proportion of higher wave number. The tendency for hot and cold regions to be further west at greater heights, discussed in volume 3 data catalog, is again evident in these maps.

Table 1-5 gives quantitative data to support these observations. The amplitude and phase of the first two wave numbers are given for days of high wave activity. Values are given at the latitude of highest amplitude between 52°S and 68°S (these latitudes are found separately for different wave numbers, channels and days). On each day the wave number one phases were further eastward on lower channels, demonstrating how well the westward tilt rule applies to the lowest wave number. Wave number two phases behaved in this way only on days 227, 234, 244 and 251. The mean amplitudes averaged

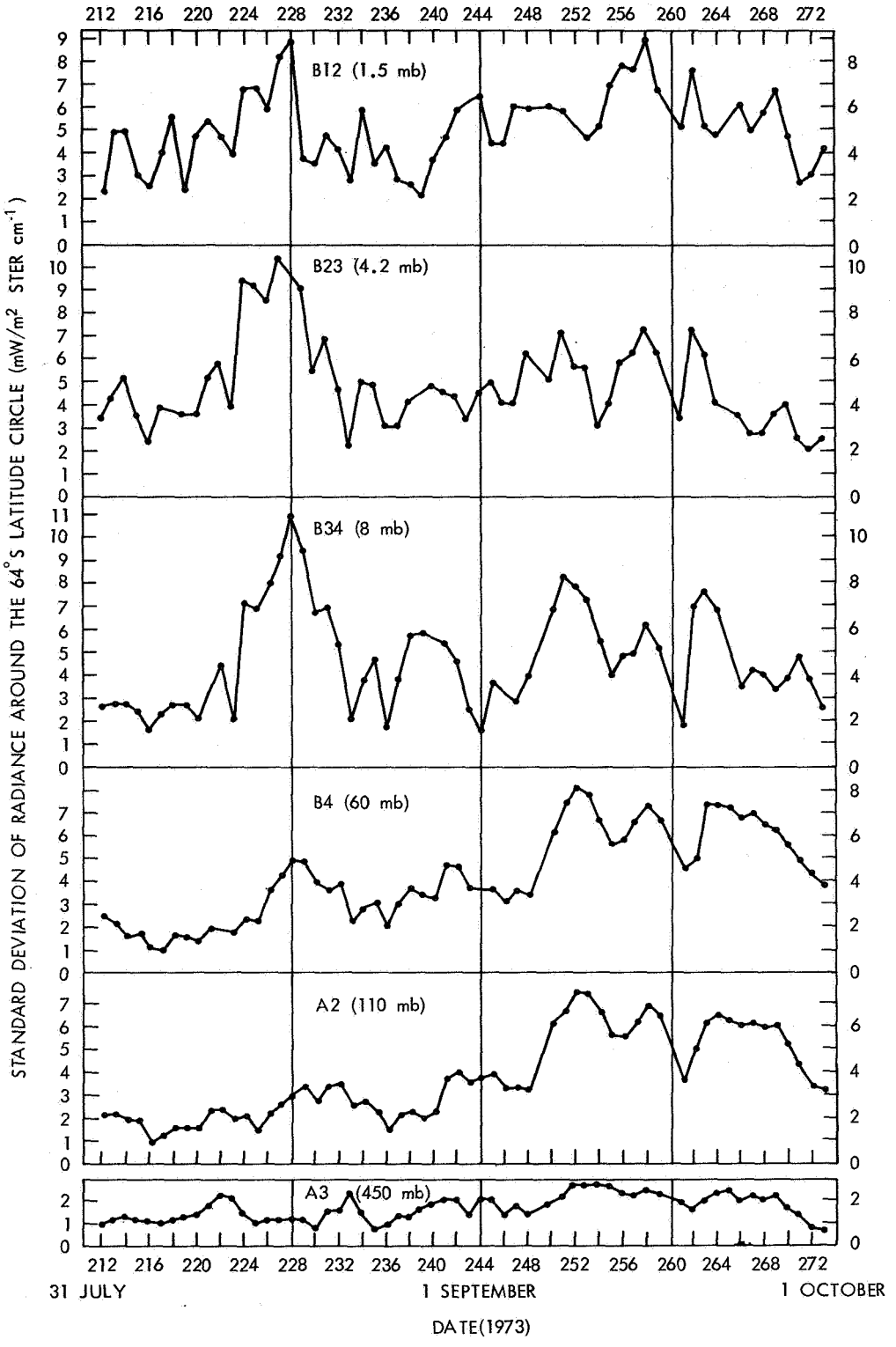


Figure 1-2 Standard Deviation from the Zonal Mean of Radiance around the 64° Latitude Circle for SCR Channels. Value were calculated from the daily analyses. Units are mW/m^2 ster cm^{-1}. One unit is approximately 1°C at these radiances.

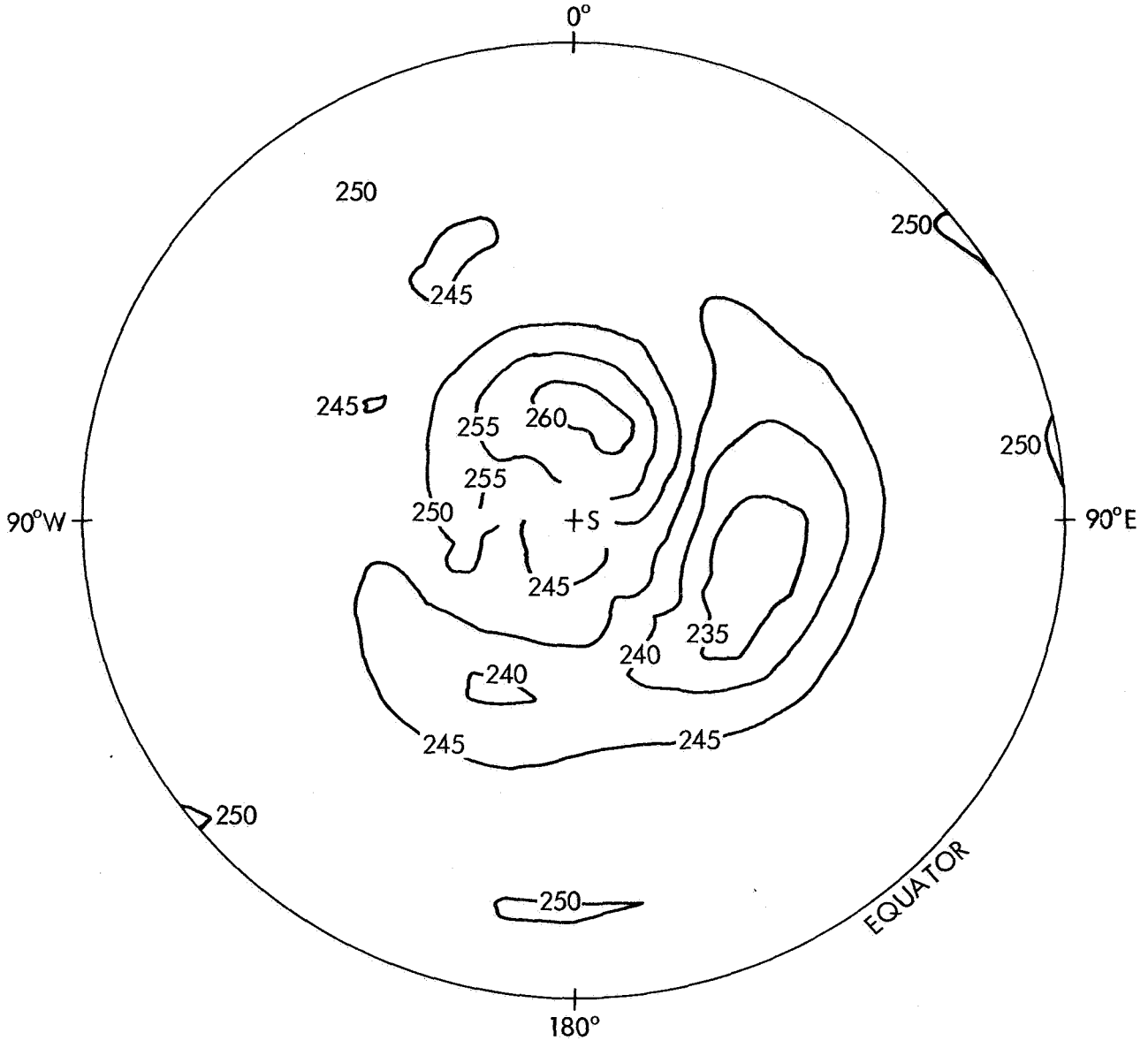


Figure 1-3 Southern Hemisphere Polar Stereographic Map of Blackbody Temperatures Equivalent to Radiances Derived from SCR Channels B12 for 15 August 1973.

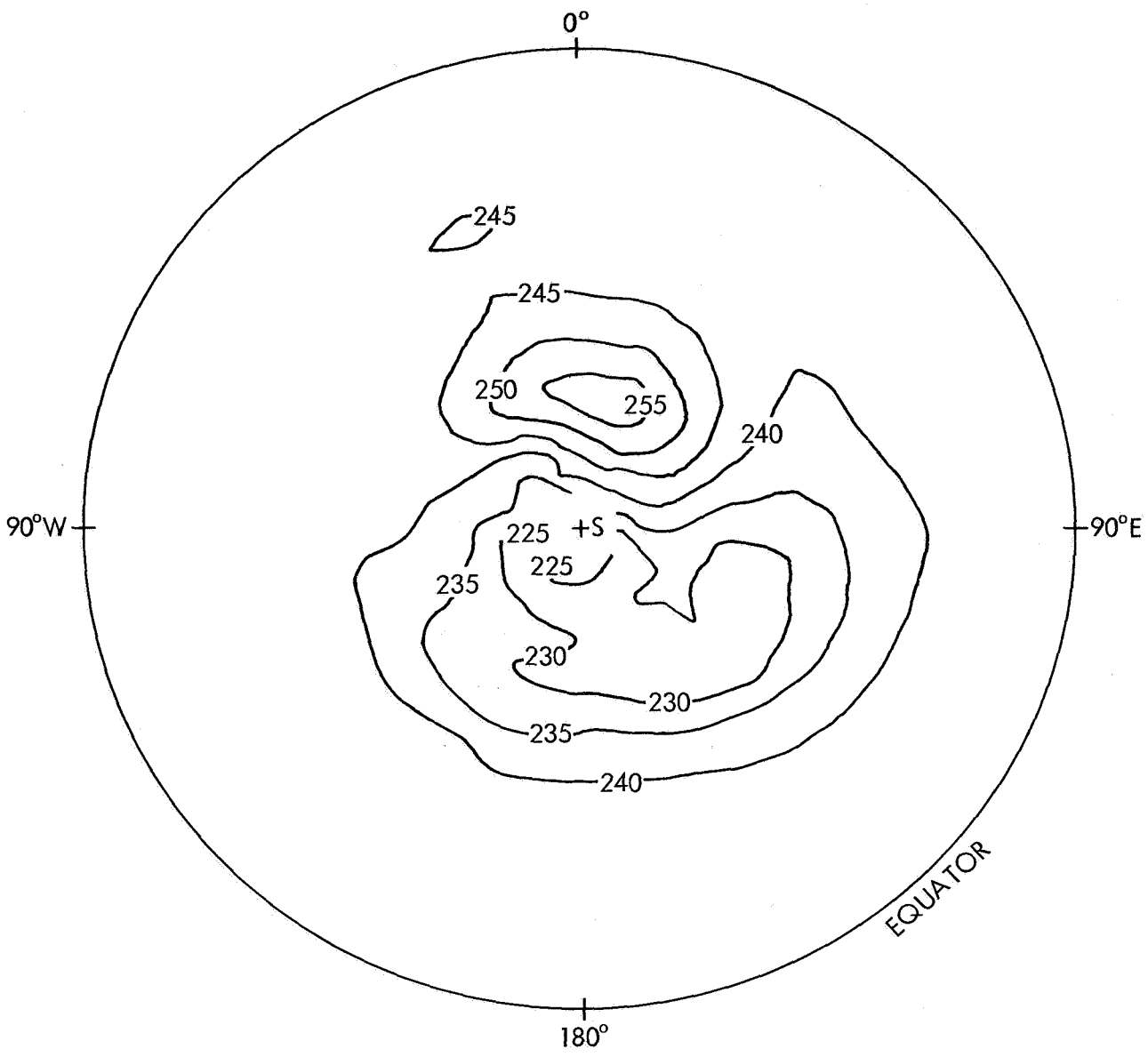


Figure 1-4 Southern Hemisphere Polar Stereographic Map of Blackbody Temperatures Equivalent to Radiances Derived from SCR Channels B23 for 15 August 1973.

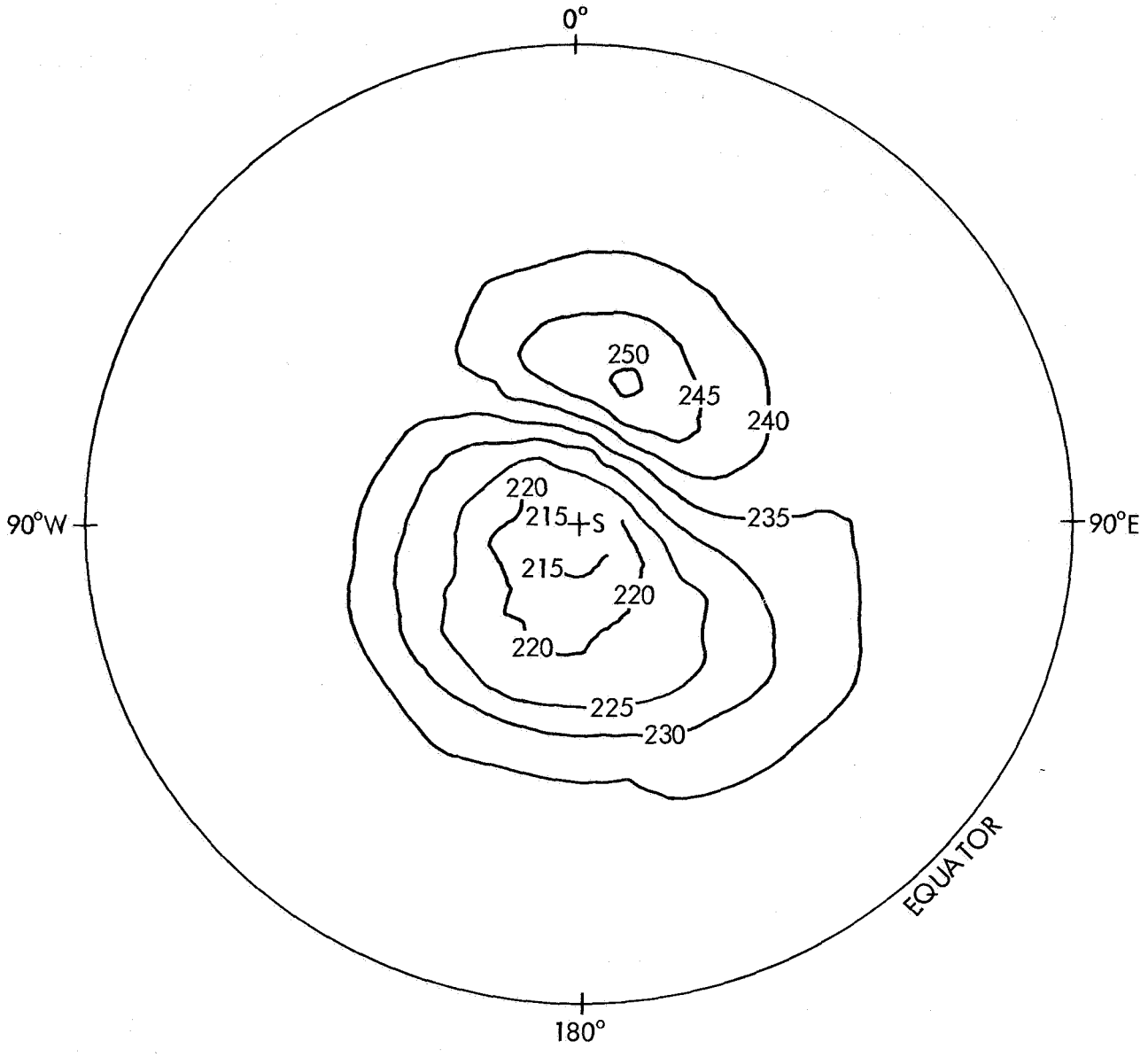


Figure 1-5 Southern Hemisphere Polar Stereographic Map of Blackbody Temperatures Equivalent to Radiances Derived from SCR Channels B34 for 15 August 1973.

Table 1-5

Fourier Analysis Results of Nimbus 5 SCR Data for Days of High Eddy Activity During August and September 1973

Each amplitude is the highest in the latitude range 52°S-68°S for that channel, day and wavenumber, while the phase is given for that latitude. Amplitude is in mW/m^2 ster cm^{-1}. Phase is for a cosine wave, in degrees east of Greenwich for wavenumber one, in half degrees longitude (degrees of phase) east of Greenwich for wavenumber two.

			Wave Number 1					Wave Number 2				
Date (1973)	Day	Channel mb Peak ( )	B12 (1.5)	B23 (4.2)	B34 (8)	B4 (60)	A2 (110)	B12 (1.5)	B23 (4.2)	B34 (8)	B4 (60)	A2 (110)
16 Aug.	227	Amp.	11.7	15.4	14.4	7.9	5.4	5.2	5.2	4.3	2.1	1.5
		phase	325	352	17	48	59	2	29	62	118	149
22 Aug.	234	Amp.	8.2	8.0	5.9	3.2	3.3	5.3	3.3	2.6	3.5	3.4
		phase	358	15	27	58	85	73	105	186	241	253
27 Aug.	239	Amp.	4.3	8.9	7.8	6.1	4.1	1.4	1.5	1.8	1.6	1.6
		phase	269	37	43	63	62	29	170	137	147	191
1 Sept.	244	Amp.	6.1	4.6	2.1	4.0	4.4	7.4	5.7	1.6	4.2	4.5
		phase	6	2	74	111	112	136	148	198	308	311
8 Sept.	251	Amp.	8.1	9.9	11.3	9.8	8.8	4.9	4.8	1.7	3.3	3.7
		phase	340	5	45	67	74	319	333	29	118	126
15 Sept.	258	Amp.	12.6	9.9	8.7	10.1	9.8	3.0	4.0	1.9	1.3	1.3
		phase	315	332	53	95	101	67	40	64	254	318
19 Sept.	262	Amp.	8.4	8.6	8.3	6.2	5.2	6.8	5.8	1.1	5.4	5.3
		phase	309	326	11	54	76	252	249	124	81	80
21 Sept.	264	Amp.	3.6	3.6	10.1	10.1	8.6	5.7	5.2	2.2	3.3	3.7
		phase	251	53	59	64	68	350	340	314	184	174
	Mean amplitude		7.9	8.4	8.6	7.2	6.2	5.0	4.4	2.2	3.1	3.1
	Mean amplitude of wave number one divided by that of wave number two.		1.6	1.9	4.0	2.3	2.0					

over these days, for wave number one, showed an increase up to B34 levels with a decrease above, as noted for the standard deviations. Wave number two exhibited the reverse, with a minimum at B34 levels and an increase above. This difference between the two wave numbers is demonstrated dramatically by the ratio of wave number one to two amplitudes, which was 4.0 at B34 levels, diminishing to 1.6 at B12 levels. These values support results obtained* from averaging over 106 days of Nimbus 4 SCR data for the Northern Hemisphere 1971/72 winter. These results also suggest that the Nimbus F Pressure Modulator Radiometer, which will measure emission to 85 km, may see domination by wave number two in the mesosphere.

*J. J. Barnett, D. Phil. thesis, in Remote Sounding of the Atmosphere, Oxford University, 1973

Figure 1-6 gives the difference between the zonal mean radiance at 80°S and at 52°S. On channel B12 80°S became hotter than 52°S on day 224 (12 August). By contrast, in the preceding Northern Hemisphere winter, 80°N became hotter than 52°N at this height on day 115 (April 25), which is 73 days later relative to the equinox than when this occurred in the Southern Hemisphere winter. Thus, these Nimbus 5 results support the previous finding of a hemispheric difference in the sign of the meridional temperature gradient at high latitudes during the late winter near the stratopause.

The 52°S - 80°S temperature differences (Figure 1-6) were subject to 1- to 2-week oscillations, in addition to any trend, with marked similarity between variations on nearby channels. In the stratosphere these variations should theoretically be closely associated with wave activity, since planetary waves transport heat poleward, yet the variations themselves are affected by the zonal wind which depends upon the meridional temperature gradient at lower levels. Comparison between Figures 1-2 and 1-6 might be expected to show coupling between eddy amplitudes and meridional gradients, but no clear correlation between these quantities occurred for the 61 day period of this analysis. Standard deviations in Figure 1-2 exhibited 1- to 2-week variations but direct interaction with the meridional gradient was not apparent. Possibly the best correlations (which were negative as might be expected) were between the B4 (or B34) meridional difference and the B34 (or B23) standard deviation of two days later. While not presenting a clear mechanism for the sudden warming, data of this type for several winters does allow a statistical model to be derived. In particular these results show that data from the troposphere (channels A3, A2) fit with those from the stratosphere, and since planetary waves are supposed to be generated in the troposphere, it is important to consider observations of the troposphere when studying sudden warmings.

1.7 The Nimbus E Microwave Spectrometer (NEMS) Experiment

The NEMS instrument continued to perform well during this catalog period. The experimenter at MIT, Cambridge, Massachusetts, continues to receive all NEMS data and is using it for research. Examples and analysis of some of the output products are in volume 1 through 3 of this catalog series.

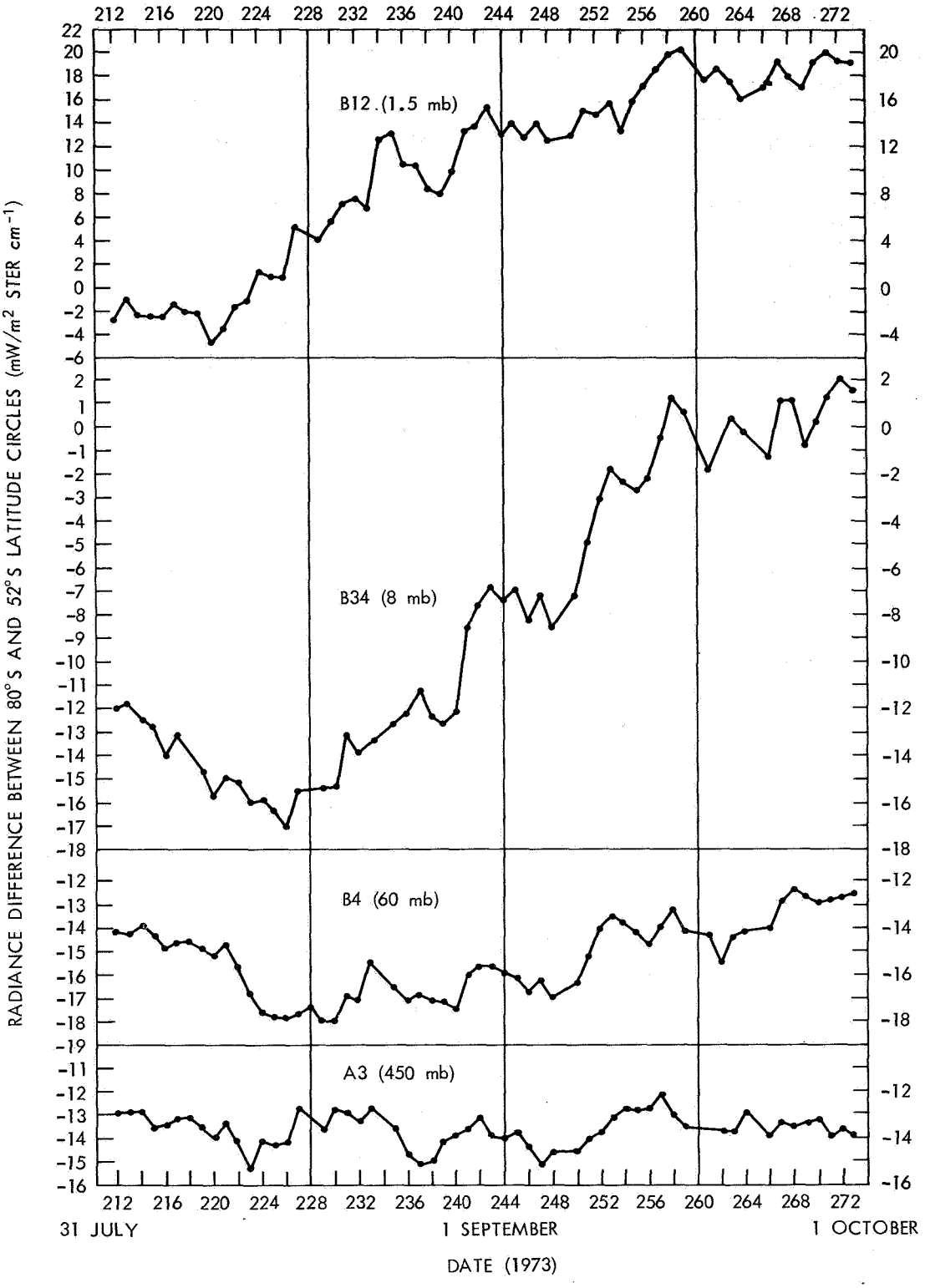


Figure 1-6 Zonal Mean Radiance at 80°S minus that at 52°S Derived from SCR Data. Values were calculated from the daily analyses. Radiance units are mW/m^2 ster cm^1. One unit is approximately 1°C at these radiances.

SECTION 2

THE ORBITAL ELEMENTS AND DATA AVAILABILITY ON-OFF TIMES

The Nimbus 5 Brouwer Mean orbital elements for selected epochs during October and November 1973 are listed in Table 2-1.

Table 2-1

Nimbus 5 Brouwer Mean Orbital Elements
for October and November 1973

Epoch	Universal Time	8 Oct. 73 00 00 00	22 Oct. 73 00 00 00	8 Nov. 73 00 00 00	25 Nov. 73 00 00 00
Semi-Major Axis	Km	7473.537	7473.533	7473.530	7473.526
Eccentricity		.000816	.000835	.000879	.000897
Inclination	Degrees	99.931	99.932	99.933	99.934
Argument of Perigee	Degrees	224.018	188.917	148.960	109.648
Right Ascension of Ascending Node	Degrees	189.166	202.712	219.450	236.191
Height of Perigee	Km	1089.27	1089.13	1088.78	1088.65
Height of Apogee	Km	1101.47	1101.61	1101.95	1102.07
Anomalistic Period	Minutes	107.1634	107.1634	107.1633	107.1632
Motion of Perigee	Deg. per Day	-2.4351	-2.4350	-2.4349	-2.4349

The data availability on-off times (Table 2-2) list the times when the data from each instrument was recorded on a HDRSS.

THIR orbital coverage in Table 2-2 is divided between daytime and nighttime data. The THIR data is normally recorded simultaneously from both 6.7 μm and 11.5 μm channels. Therefore, the listed on-off times apply to both channels.

A THIR data orbit is defined as beginning and ending at the night-day terminator. Thus, the daytime data orbit extends from the night-day terminator to the day-night terminator. Each daytime THIR data orbit is assigned the orbit number of the ascending node which occurs during that portion of the orbit. The same orbit number is assigned also to the succeeding nighttime data orbit.

The "INT ORBIT & STDN" identify the orbit and the ground station to which the satellite data is transmitted. The letter "R" denotes Rosman, North Carolina; the letter "A" denotes Fairbanks, Alaska.

The "HDRSS" identifies the satellite tape recorder, either A or B.

The "THIR GRID CORR" columns are used to indicate an image grid error in latitude and longitude whenever either is in error by more than one degree of great circle arc (60 n. m.). Latitude errors are suffixed by an N or S; longitude errors, by an E or W. An N or S indicates the grid should be moved up or down by the amount shown to obtain a good fit of the grid to the geography. An E or W indicates the grid should be moved right or left, at the equator, by the amount shown.

Ascending node times and longitudes are the times and longitudes at which the satellite crosses the equator in the northbound direction. These crossings always occur during the daytime portion of the orbit. The descending nodes and times refer to the southbound crossings, which occur during the nighttime portion of the orbit.

ESMR, NEMS, SCR, and ITPR are normally on all the time. Their sensory information is recorded on a HDRSS between interrogations, and their on- and off-times define the total record times between interrogations. An interrogation orbit is the orbit during which previously recorded data is transmitted to a ground station. This data will be from segments of two or more data orbits. To determine the orbital coverage of the data from any interrogation, the on- and off-times should be matched with the appropriate ascending or descending node listed with the THIR information on the same page of Table 2-2. Coverage can then be determined as described below.

The "DATA ORBIT" indicator in the ESMR table is given only for reference purposes. It is the number which appears on the data display image, samples of which are reproduced in Section 3, and identifies the last data orbit on each display. It should not be confused with the THIR data orbit number.

Table 2-2 together with the World Map (Figure 2-1) and the vellum Subsatellite Tracks Overlay attached to the back of this catalog, can be used to determine approximate geographic coverages.

A Subsatellite Tracks Overlay is correctly oriented with the World Map when the ascending or descending node line on the overlay coincides with the 0-degree latitude (equator) line of the World Map. Orbital coverage is determined by placing an orbit track on the world map at the appropriate ascending node (for daytime) or descending node (for nighttime) longitude for the orbit of interest.

The Subsatellite Tracks Overlay contains 14 correctly spaced tracks, which end at the approximate earth day-night transitions. The tracks contain time ticks spaced 5 minutes apart, appropriately annotated at the edge of the overlay, referenced from the equator. Times in minutes from equator crossings for all or part of a particular orbit are calculated by adding or subtracting from the ascending or descending node time listed for that orbit in the Data Availability On-Off Times Table.

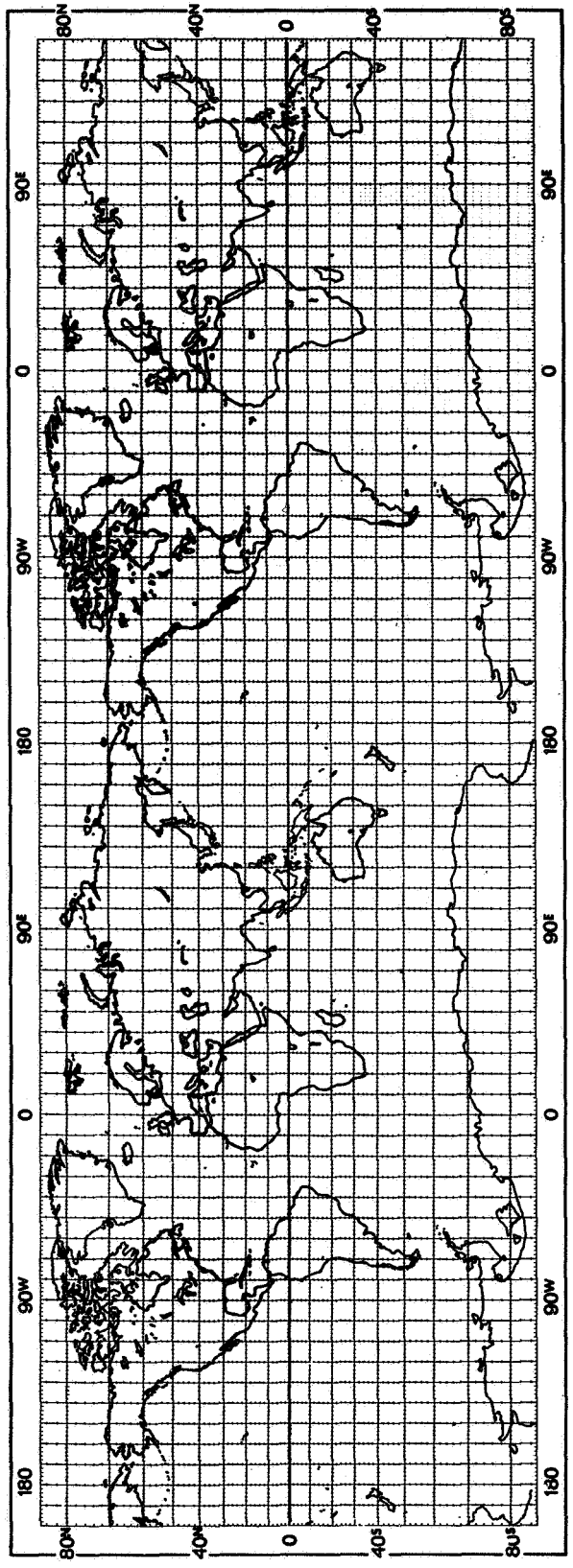


Figure 2-1 World Map

The nature and format of the data to be available from each experiment are explained in detail in the respective sections of The Nimbus 5 User's Guide. The appropriate sources for requesting the various data types are listed in Section 1.7 of the same manual.

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
1 OCTOBER 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
3943	0033	0122	3945R	A		005928	E157.6	3943	2344	0143	3945R	A
3944						024644	E130.8	3945	0317	0511	3945R	B
3945	0408	0457	3945R	B		043401	E104.0	3946	0517	0700	3946R	B
3946	0555	0644	3946R	B		062117	E077.2	3947	0705	0841	3947A	B
3947	0743	0831	3947A	B		080834	E050.4	3948	0846	1028	3948A	B
3948	0930	1018	3948A	B		095550	E023.5	3949	1033	1215	3949A	B
3949	1117	1206	3949A	B		114307	W003.3	3950	1219	1358	3950A	B
3950	1304	1353	3950A	B		133023	W030.1	3951	1402	1541	3951A	B
3951	1452	1540	3951A	B		151740	W056.9	3952	1545	1723	3952A	B
3952	1639	1722	3952A	B		170456	W083.7	3953	1728	1906	3953A	B
3953	1826	1905	3953A	B		185213	W110.6	3954	1913	2056	3954A	B
3954	2013	2055	3954A	B		203929	W137.4	3955	2101	2243	3955A	B
3955	2201	2242	3955A	B		222646	W164.2					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
3943	0122	0142	3945R	A		015305	W035.8		2345	0143	3945R	A
3944	0317	0408	3945R	B		034021	W062.6		0317	0511	3945R	B
3945	0457	0510	3945R	B		052738	W089.5		0517	0700	3946R	B
3945	0517	0555	3946R	B					0705	0841	3947A	B
3946	0644	0700	3946R	B		071454	W116.3		0846	1028	3948A	B
3946	0705	0743	3947A	B					1033	1215	3949A	B
3947	0831	0840	3947A	B		090211	W143.1		1219	1358	3950A	B
3947	0846	0930	3948A	B					1402	1541	3951A	B
3948	1018	1027	3948A	B		104927	W169.9		1546	1723	3952A	B
3948	1033	1117	3949A	B					1728	1906	3953A	B
3949	1206	1214	3949A	B		123644	E163.3		1911	2056	3954A	B
3949	1219	1304	3950A	B					2101	2243	3955A	B
3950	1402	1452	3951A	B		142400	E136.5					
3951	1546	1639	3952A	B		161117	E109.7					
3952	1728	1826	3953A	B		175833	E082.9					
3953	1915	2013	3954A	B		194550	E056.0					
3954	2102	2201	3955A	B		213306	E029.2					
3955						232023	E002.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
2 OCTOBER 1973

THIR							ASC. AND		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO		DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR						ASC. NODE						
3956							001402	E169.0	3957	0045	0239	3958R	A
3957	0135	0224	3958R	A			020119	E142.2	3958	0233	0428	3958R	B
3958	0323	0411	3958R	B			034835	E115.3	3959	0424	0615	3959R	B
3959	0510	0558	3959R	B			053552	E088.5	3960	0620	0756	3960A	B
3960	0657	0746	3960A	B			072308	E061.7	3961	0800	0942	3961A	B
3961	0844	0933	3961A	B			091025	E034.9	3962	0946	1131	3962A	B
3962	1032	1120	3962A	B			105741	E008.1	3963	1135	1316	3963A	B
3963	1219	1307	3963A	B			124458	W018.8	3964	1321	1458	3964A	B
3964	1406	1455	3964A	B			143214	W045.6	3965	1502	1640	3965A	B
3965	1553	1640	3965A	B			161931	W072.4	3966	1645	1821	3966A	B
3966	1741	1821	3966A	B			180647	W099.2	3967	1828	2007	3967A	B
3967	1928	2007	3967A	B			195404	W126.0	3968	2014	2156	3968A	B
3968	2115	2155	3968A	B			214120	W152.9					
3969							232837	W179.7					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
3956	0046	0135	3958R	A					0046	0238	3958R	A	
3957	0224	0238	3958R	A			010739	W024.4	0233	0428	3958R	B	
3957	0233	0323	3958R	B			025456	W051.2	0434	0615	3959R	B	
3958	0411	0427	3958R	B					0620	0756	3960A	B	
3958	0435	0510	3959R	B			044212	W078.1	0801	0942	3961A	B	
3959	0558	0614	3959R	B					0946	1130	3962A	B	
3959	0620	0657	3960A	B			062929	W104.9	1135	1316	3963A	B	
3960	0746	0755	3960A	B					1321	1458	3964A	B	
3960	0801	0844	3961A	B			081645	W131.7	1502	1641	3965A	B	
3961	0933	0941	3961A	B					1645	1822	3966A	B	
3961	0946	1032	3962A	B			100402	W158.5	1827	2008	3967A	B	
3962	1120	1130	3962A	B					2013	2156	3968A	B	
3962	1135	1219	3963A	B			115118	E174.7					
3963	1307	1315	3963A	B									
3963	1321	1406	3964A	B			133835	E147.8					
3964	1502	1553	3965A	B									
3965	1646	1741	3966A	B			152551	E121.0					
3966	1829	1928	3967A	B			171308	E094.2					
3967	2016	2115	3968A	B			190024	E067.4					
3968							204741	E040.6					
3969	0014	0050	3972R	A			223457	E013.8					
							002214	W013.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
3 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
3970	0050	0138	3972R	A		011553	E153.5	3970	0013	0159	3972R	A
3971	0237	0320	3972R	B		030310	E126.7	3971	0147	0320	3971R	B
3972						045026	E099.9	3973	0533	0717	3973R	B
3973	0612	0700	3973R	B		063743	E073.1	3974	0721	0855	3974A	B
3974	0759	0847	3974A	B		082459	E046.3	3975	0900	1045	3975A	B
3975	0946	1035	3975A	B		101216	E019.4	3976	1050	1229	3976A	B
3976	1133	1222	3976A	B		115932	W007.4	3977	1234	1415	3977A	B
3977	1321	1409	3977A	B		134649	W034.2	3978	1419	1557	3978A	B
3978	1508	1556	3978A	B		153405	W061.0	3979	1602	1739	3979A	B
3979	1655	1738	3979A	B		172122	W087.8	3980	1744	1927	3980A	B
3980	1842	1906	3980A	B		190838	W114.7	3981	1935	2104	3981A	B
3980	1907	1923	3980A	B				3982	2121	2257	3982A	A
3981	2030	2107	3982A	B		205555	W141.5					
3982	2217	2256	3982A	A		224311	W168.3					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
3970	0138	0156	3972R	A		020930	W039.9	0014	0156	3972R	A	
3970	0147	0237	3972R	B				0147	0321	3972R	B	
3971						035647	W066.7	0533	0716	3973R	B	
3972	0533	0612	3973R	B		054403	W093.5	0721	0855	3974A	B	
3973	0700	0715	3973R	B		073120	W120.4	0900	1045	3975A	B	
3973	0721	0759	3974A	B				1050	1230	3976A	B	
3974	0847	0854	3974A	B		091836	W147.2	1234	1415	3977A	B	
3974	0900	0946	3975A	B				1419	1557	3978A	B	
3975	1035	1044	3975A	B		110553	W174.0	1602	1739	3979A	B	
3975	1050	1133	3976A	B				1744	1928	3980A	B	
3976	1222	1229	3976A	B		125309	E159.2	1935	2105	3982A	B	
3976	1234	1321	3977A	B				2122	2257	3982A	A	
3977	1420	1508	3978A	B		144026	E132.4					
3978	1602	1655	3979A	B		162742	E105.6					
3979	1744	1842	3980A	B		181459	E078.8					
3980	1935	2030	3982A	B		200215	E051.9					
3981	2122	2217	3982A	A		214932	E025.1					
3982	2324	0004	3985R	A		233648	W001.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
4 OCTOBER 1973

THIR							ASC. AND		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO		DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR						ASC. NODE						
3983	0004	0053	3985R	A			003028	E164.9	3983	2324	0112	3985R	A
3984							021744	E138.1	3985	0249	0444	3985R	B
3985	0339	0427	3885R	B			040501	E111.2	3986	0449	0556	3986R	B
3986	0526	0615	3986R	B			055217	E084.4	3987	0653	0810	3987A	B
3987	0713	0802	3987A	B			073934	E057.6	3988	0815	0958	3988A	B
3988	0901	0949	3988A	B			092650	E030.8	3989	1002	1147	3989A	B
3989	1048	1136	3989A	B			111407	E004.0	3990	1152	1332	3990A	B
3990	1235	1324	3990A	B			130123	W022.9	3991	1336	1513	3991A	B
3991	1422	1511	3991A	B			144840	W049.7	3992	1518	1655	3992A	B
3992	1610	1655	3992A	B			163556	W076.5	3993	1700	1840	3993A	B
3993	1757	1839	3993A	B			182313	W103.3	3994	1844	2025	3994A	B
3994	1944	2024	3994A	B			201029	W130.1	3995	2030	2213	3995A	B
3995	2131	2212	3995A	B			215746	W157.0					
3996							234502	E176.2					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
3983	0053	0112	3985R	A			012405	W028.5	2324	0112	3985R	A	
3984	0250	0339	3985R	B			031121	W055.3	0249	0444	3985R	B	
3985	0427	0443	3985R	B			045838	W082.2	0449	0630	3986R	B	
3985	0449	0526	3986R	B					0635	0811	3987A	B	
3986	0615	0630	3986R	B			064554	W109.0	0815	0957	3988A	B	
3986	0635	0713	3987A	B					1003	1147	3989A	B	
3987	0802	0810	3987A	B			083311	W135.8	1152	1332	3990A	B	
3987	0815	0901	3988A	B					1337	1513	3991A	B	
3988	0949	0956	3988A	B			102027	W162.6	1518	1656	3992A	B	
3988	1002	1048	3989A	B					1701	1840	3993A	B	
3989	1136	1147	3989A	B			120744	E170.6	1844	2025	3994A	B	
3989	1152	1235	3990A	B					2030	2213	3995A	B	
3990	1324	1331	3990A	B			135500	E143.7					
3990	1336	1422	3991A	B									
3991	1518	1610	3992A	B			154217	E116.9					
3992	1701	1757	3993A	B			172933	E090.1					
3993	1845	1944	3994A	B			191650	E063.3					
3994	2033	2131	3995A	B			210406	E036.5					
3995							225123	E009.6					
3996							003839	W017.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
5 OCTOBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR							**ASC. NODE**						
3997							013219	E149.4	3998	0204	0403	4001A	A
3998	0253	0342	4001A	A			031936	E122.6	3999	0401	0523	3999R	B
3999	0440	0529	3999R	B			050652	E095.8	4000	0553	0727	4000A	B
4000	0628	0716	4000A	B			065409	E069.0	4001	0732	0911	4001A	B
4001	0815	0904	4001A	B			084125	E042.1	4002	0916	1103	4002A	B
4002	1002	1051	4002A	B	1W		102842	E015.3	4003	1107	1247	4003A	B
4003	1150	1238	4003A	B			121558	W011.5	4004	1251	1430	4004A	B
4004	1337	1425	4004A	B			140315	W038.3	4005	1435	1612	4005A	B
4005	1524	1611	4005A	B			155031	W065.2	4006	1617	1756	4006A	B
4006	1711	1755	4006A	B			173748	W092.0	4007	1801	1941	4007A	B
4007	1859	1940	4007A	B			192504	W118.8	4008	1946	2126	4008A	B
4008	2046	2125	4008A	B			211221	W145.6	4009	2131	2318	4009A	B
4009	2233	2317	4009A	B			225937	W172.4					
NIGHTTIME THIR							**DESC. NODE**		**NEMS - SCR - ITPR**				
3997	0204	0253	4001A	A			022556	W044.0	0203	0403	4001A	A	
3998	0342	0402	4001A	A			041312	W070.8	0401	0524	3999R	B	
3998	0401	0440	3999R	B					0554	0727	4000A	B	
3999	0554	0628	4000A	B			060029	W097.6	0732	0911	4001A	B	
4000	0716	0726	4000A	B			074745	W124.5	0915	1102	4002A	B	
4000	0732	0815	4001A	B					1107	1247	4003A	B	
4001	0904	0910	4001A	B			093502	W151.3	1251	1430	4004A	B	
4001	0915	1002	4002A	B	1E				1435	1612	4005A	B	
4002	1051	1102	4002A	B	1E		112218	W178.1	1617	1756	4006A	B	
4002	1107	1150	4003A	B					1801	1941	4007A	B	
4003	1238	1246	4003A	B			130935	E155.1	1946	2126	4008A	B	
4003	1252	1337	4004A	B					2131	2318	4009A	B	
4004	1435	1524	4005A	B			145651	E128.3					
4005	1617	1711	4006A	B			164408	E101.4					
4006	1801	1859	4007A	B			183124	E074.6					
4007	1947	2046	4008A	B			201841	E047.8					
4008	2134	2233	4009A	B			220557	E021.0					
4009	2322	0020	4012R	A			235314	W005.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
6 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4010	0020	0109	4012R	A		004654	E160.8	4010	2319	0118	4012R	A
4011						023410	E134.0	4012	0305	0453	4012R	B
4012	0355	0443	4012R	B		042127	E107.1	4013	0505	0648	4013R	B
4013	0542	0631	4013R	B		060843	E080.3	4014	0653	0828	4014A	B
4014	0729	0818	4014A	B		075600	E053.5	4015	0833	1013	4015A	B
4015	0917	1005	4015A	B		094316	E026.7	4016	1019	1203	4016A	B
4016	1104	1153	4016A	B		113033	W000.1	4017	1208	1345	4017A	B
4017	1251	1340	4017A	B		131749	W027.0	4018	1350	1533	4018A	B
4018	1439	1527	4018A	B		150506	W053.8	4019	1537	1713	4019A	B
4019	1626	1712	4019A	B		165222	W080.6	4020	1718	1855	4020A	B
4020	1813	1854	4020A	B	1E	183939	W107.4	4021	1900	2041	4021A	B
4021	2001	2040	4021A	B		202655	W134.2	4022	2046	2229	4022A	B
4022	2148	2228	4022A	B		221412	W161.1					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4010	0109	0117	4012R	A		014030	W032.7		2319	0117	4012R	A
4011	0306	0355	4012R	B		032747	W059.5		0305	0453	4012R	B
4012	0443	0452	4012R	B		051503	W086.3		0504	0648	4013R	B
4012	0504	0542	4013R	B					0653	0828	4014A	B
4013	0631	0647	4013R	B		070220	W113.1		0833	1013	4015A	B
4013	0653	0729	4014A	B					1019	1203	4016A	B
4014*	0818	0827	4014A	B		084936	W139.9		1208	1346	4017A	B
4014	0833	0917	4015A	B					1350	1533	4018A	B
4015	1005	1013	4015A	B		103653	W166.8		1537	1713	4019A	B
4015	1019	1104	4016A	B					1718	1855	4020A	B
4016	1153	1202	4016A	B		122409	E166.4		1859	2041	4021A	B
4016	1208	1251	4017A	B					2046	2229	4022A	B
4017	1350	1439	4018A	B		141126	E139.6					
4018	1537	1626	4019A	B		155842	E112.8					
4019	1718	1813	4020A	B	1W	174559	E086.0					
4020	1902	2001	4021A	B		193315	E059.2					
4021	2049	2148	4022A	B		212032	E032.4					
4022						230748	E005.6					

*NO 6.7 DATA

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
7 OCTOBER 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4023						000128	E172.1	4024	0033	0228	4026R	A
4024	0122	0211	4026R	A		014845	E145.3	4025	0219	0421	4025R	B
4025	0309	0358	4026R	B		033601	E118.5	4027	0606	0740	4027A	B
4026						052318	E091.7	4028	0745	0929	4028A	B
4027	0644	0732	4027A	B		071034	E064.8	4029	0934	1119	4029A	B
4028	0831	0920	4028A	B		085751	E038.0	4030	1124	1304	4030A	B
4029	1018	1107	4029A	B		104507	E011.2	4031	1308	1446	4031A	B
4030	1206	1254	4030A	B		123224	W015.6	4032	1451	1631	4032A	B
4031	1353	1442	4031A	B		141940	W042.4	4033	1635	1809	4033A	B
4032	1540	1629	4032A	B		160657	W069.3	4034	1815	1955	4034A	B
4033	1728	1809	4033A	B		175413	W096.1	4035	2001	2145	4035A	B
4034	1915	1955	4034A	B		194130	W122.9	4036	2148	2329	4039R	A
4035	2102	2144	4035A	B		212846	W149.7					
4036	2249	2338	4039R	A		231603	W176.5					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4023	0033	0122	4026R	A		005505	W021.3		0033	0227	4026R	A
4024	0211	0227	4026R	A		024221	W048.1		0219	0421	4026R	B
4024	0219	0309	4026R	B					0606	0741	4027A	B
4025	0358	0421	4026R	B		042938	W074.9		0745	0929	4028A	B
4026	0606	0644	4027A	B		061654	W101.7		0934	1119	4029A	B
4027	0732	0740	4027A	B		080411	W128.5		1124	1303	4030A	B
4027	0745	0831	4028A	B					1308	1447	4031A	B
4028	0920	0928	4028A	B		095127	W155.4		1451	1630	4032A	B
4028	0934	1018	4029A	B					1635	1810	4033A	B
4029	1107	1118	4029A	B		113844	E177.8		1814	1955	4034A	B
4029	1124	1206	4030A	B					2000	2145	4035A	B
4030	1254	1303	4030A	B		132600	E151.0		2149	2347	4039R	A
4030	1308	1353	4031A	B								
4031	1451	1540	4032A	B		151317	E124.2					
4032	1635	1728	4033A	B		170033	E097.4					
4033	1816	1915	4034A	B		184750	E070.5					
4034	2003	2102	4035A	B		203506	E043.7					
4035	2151	2249	4039R	A		222223	E016.9					
4036	2338	2347	4039R	A		000939	W009.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
8 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4037						010319	E156.6	4039	0322	0515	4039R	B
4038						025036	E129.8	4041	0709	0845	4041A	B
4039	0411	0500	4039R	B		043752	E103.0	4042	0849	1034	4042A	B
4040	0558	0647	4040R	B		062509	E076.2	4043	1039	1218	4043A	B
4041	0746	0834	4041A	B		081225	E049.4	4044	1223	1401	4044A	B
4042	0933	1022	4042A	B		095942	E022.6	4045	1406	1545	4045A	B
4043	1120	1209	4043A	B	1W	114658	W004.3	4046	1549	1727	4046A	B
4044	1307	1356	4044A	B		133415	W031.1	4047	1732	1910	4047A	B
4045	1455	1543	4045A	B		152132	W057.9	4048	1917	2059	4048A	B
4046	1642	1727	4046A	B		170848	W084.7	4049	2104	2247	4049A	B
4047	1829	1910	4047A	B		185604	W111.6					
4048	2017	2059	4048A	B		204321	W138.4					
4049	2204	2247	4049A	B		223037	W165.2					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4037						015656	W036.7	0322	0515	4039R	B	
4038	0322	0411	4039R	B		034412	W063.6			4040R	B	
4039	0500	0514	4039R	B		053129	W090.4	0709	0845	4041A	B	
4039	0521	0558	4040R	B				0850	1034	4042A	B	
4040	0647	0703	4040R	B		071845	W117.2	1039	1218	4043A	B	
4040	0709	0746	4041A	B				1223	1401	4044A	B	
4041	0834	0844	4041A	B		090602	W144.0	1406	1545	4045A	B	
4041	0850	0933	4042A	B				1550	1728	4046A	B	
4042	1022	1033	4042A	B		105318	W170.8	1732	1911	4047A	B	
4042	1039	1120	4043A	B	1E			1915	2059	4048A	B	
4043	1209	1218	4043A	B	1E	124035	E162.3	2104	2247	4049A	B	
4043	1223	1307	4044A	B								
4044	1405	1455	4045A	B		142751	E135.5					
4045	1550	1642	4046A	B		161508	E108.7					
4046	1732	1829	4047A	B		180224	E081.9					
4047	1918	2017	4048A	B		194941	E055.1					
4048	2105	2204	4049A	B		213657	E028.2					
4049						232414	E001.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
9 OCTOBER 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR		DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR						ASC. NODE						
4050							001754	E168.0	4051	0049	0244	4053R	A
4051	0138	0227	4053R	A			020510	E141.2	4052	0236	0434	4052R	B
4052	0326	0414	4052R	B			035227	E114.4	4053	0440	0617	4053R	B
4053	0513	0601	4053R	B			053943	E087.6	4054	0623	0758	4054A	B
4054	0700	0749	4054A	B			072700	E060.8	4055	0802	0945	4055A	B
4055	0847	0936	4055A	B			091416	E033.9	4056	0950	1135	4056A	B
4056	1035	1123	4056A	B			110133	E007.1	4057	1139	1320	4057A	B
4057	1222	1311	4057A	B			124849	W019.7	4058	1323	1501	4058A	B
4058	1409	1458	4058A	B			143606	W046.5	4059	1505	1644	4059A	B
4059	1556	1643	4059A	B			162323	W073.4	4060	1648	1810	4060A	B
4060	1744	1825	4060A	B			181039	W100.2	4061	1832	2011	4061A	B
4061	1931	2011	4061A	B			195756	W127.0	4062	2018	2204	4062A	B
4062	2118	2203	4062A	B			214512	W153.8	4063	2204	0003	4066R	A
4063	2306	2354	4066R	A			233229	E179.4					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4050	0050	0138	4053R	A			011130	W025.4	0050	0243	4053R	A	
4051	0227	0243	4053R	A			025847	W052.2	0237	0434	4052R	B	
4051	0237	0326	4052R	B					0440	0617	4053R	B	
4052	0414	0433	4052R	B			044603	W079.0	0622	0758	4054A	B	
4052	0440	0513	4053R	B					0802	0945	4055A	B	
4053	0601	0617	4053R	B			063320	W105.9	0950	1135	4056A	B	
4053	0622	0700	4054A	B					1139	1319	4057A	B	
4054	0749	0757	4054A	B			082036	W132.7	1324	1501	4058A	B	
4054	0802	0847	4055A	B					1506	1644	4059A	B	
4055	0936	0945	4055A	B			100753	W159.5	1649	1826	4060A	B	
4055	0950	1035	4056A	B					1830	2012	4061A	B	
4056	1123	1134	4056A	B			115509	E173.7	2017	2204	4062A	B	
4056	1139	1222	4057A	B					2205	0003	4066R	A	
4057	1311	1318	4057A	B			134226	E146.9					
4057	1324	1409	4058A	B									
4058	1506	1556	4059A	B			152942	E120.0					
4059	1648	1744	4060A	B			171659	E093.2					
4060	1832	1931	4061A	B			190415	E066.4					
4061	2020	2118	4062A	B			205132	E039.6					
4062	2207	2306	4066R	A			223848	E012.8					
4063	2354	0003	4066R	A			002605	W014.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
10 OCTOBER 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4064						011945	E152.5	4065	0150	0345	4065R	B
4065	0240	0329	4065R	B		030702	E125.7	4066	0353	0530	4066R	B
4066	0427	0516	4066R	B		045418	E098.9	4067	0537	0720	4067R	B
4067	0615	0703	4067R	B		064135	E072.1	4068	0725	0859	4068A	B
4068	0802	0850	4068A	B		082851	E045.3	4069	0904	1049	4069A	B
4069	0949	1038	4069A	B		101608	E018.4	4070	1054	1235	4070A	B
4070	1136	1225	4070A	B		120324	W008.4	4071	1239	1417	4071A	B
4071	1324	1412	4071A	B		135041	W035.2	4072	1422	1559	4072A	B
4072	1511	1559	4072A	B	1N1W	153757	W062.0	4073	1605	1745	4073A	B
4073	1658	1744	4073A	B		172514	W088.8	4074	1750	1927	4074A	B
4074	1846	1926	4074A	B		191230	W115.7	4075	1933	2114	4075A	B
4075	2033	2113	4075A	B		205947	W142.5	4076	2119	2303	4076A	B
4076	2220	2303	4076A	B		224703	W169.3					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4064	0150	0240	4065R	B		021321	W040.9	0150	0346	4065R	B	
4065	0329	0345	4065R	B		040038	W067.7	0353	0530	4066R	B	
4065	0353	0427	4066R	B				0535	0720	4067R	B	
4066	0516	0530	4066R	B		054754	W094.5	0725	0859	4068A	B	
4066	0535	0615	4067R	B				0904	1049	4069A	B	
4067	0703	0720	4067R	B		073511	W121.3	1054	1235	4070A	B	
4067	0725	0802	4068A	B				1239	1418	4071A	B	
4068	0850	0858	4068A	B		092227	W148.1	1422	1600	4072A	B	
4068	0904	0949	4069A	B				1605	1745	4073A	B	
4069	1038	1049	4069A	B		110944	W174.9	1750	1926	4074A	B	
4069	1054	1136	4070A	B				1931	2114	4075A	B	
4070	1225	1234	4070A	B		125700	E158.2	2119	2303	4076A	B	
4070	1239	1324	4071A	B								
4071	1422	1511	4072A	B	1S1E	144417	E131.4					
4072	1605	1658	4073A	B		163133	E104.6					
4073	1749	1846	4074A	B		181850	E077.8					
4074	1934	2033	4075A	B		200606	E051.0					
4075	2121	2220	4076A	B		215323	E024.1					
4076						234039	W002.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
11 OCTOBER 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE				INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
4077						003420	E163.9	4078	0105	0257	4079R	A
4078	0155	0243	4079R	A		022136	E137.1	4079	0252	0425	4079R	B
4079	0342	0430	4079R	B		040853	E110.2	4080	0452	0635	4080R	B
4080	0529	0618	4080R	B		055609	E083.4	4081	0640	0810	4081A	B
4081	0716	0805	4081A	B		074326	E056.6	4082	0819	1000	4082A	B
4082	0904	0952	4082A	B		093042	E029.8	4083	1005	1151	4083A	B
4083	1051	1139	4083A	B		111759	E003.0	4084	1156	1331	4084A	B
4084	1238	1327	4084A	B		130515	W023.9	4085	1336	1519	4085A	B
4085	1425	1514	4085A	B		145232	W050.7	4086	1524	1700	4086A	B
4086	1613	1700	4086A	B		163948	W077.5	4087	1705	1842	4087A	B
4087	1800	1841	4087A	B		182705	W104.3	4088	1848	2031	4088A	B
4088	1947	2031	4088A	B		201421	W131.1	4089	2038	2221	4089A	B
4089	2135	2220	4089A	B		220138	W158.0	4090	2222	0020	4093R	A
4090	2322	0010	4093R	A		234854	E175.3					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4077	0106	0155	4079R	A		012756	W029.5		0106	0257	4079R	A
4078	0243	0257	4079R	A		031512	W056.3		0253	0447	4079R	B
4078	0252	0342	4079R	B					0452	0635	4080R	B
4079	0430	0446	4079R	B		050229	W083.1		0640	0810	4081A	B
4079	0452	0529	4080R	B					0819	1000	4082A	B
4080	0618	0634	4080R	B		064945	W110.0		1005	1151	4083A	B
4080	0641	0716	4081A	B					1157	1331	4084A	B
4081	0805	0814	4081A	B		083702	W136.8		1336	1519	4085A	B
4081	0819	0904	4082A	B					1524	1701	4086A	B
4082	0952	0959	4082A	B		102418	W163.6		1705	1842	4087A	B
4082	1005	1051	4083A	B					1846	2032	4088A	B
4083	1139	1151	4083A	B		121135	E169.6		2039	2221	4089A	B
4083	1157	1238	4084A	B					2222	0020	4093R	A
4084	1336	1425	4085A	B		135851	E142.8					
4085	1524	1613	4086A	B		154608	E115.9					
4086	1705	1800	4087A	B		173324	E089.1					
4087	1849	1947	4088A	B		192041	E062.3					
4088	2039	2135	4089A	B		210757	E035.5					
4089	2223	2322	4093R	A		225514	E008.7					
4090	0010	0020	4093R	A		004230	W018.2					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
12 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4091						013611	E148.5	4092	0207	0409	4092R	B
4092	0256	0345	4093R	B		032327	E121.6	4094	0553	0729	4094A	B
4093						051044	E094.8	4095	0734	0916	4095A	B
4094	0631	0719	4094A	B		065800	E068.0	4096	0921	1107	4096A	B
4095	0818	0907	4095A	B		084517	E041.2	4097	1111	1249	4097A	B
4096	1005	1054	4096A	B		103233	E014.4	4098	1254	1433	4098A	B
4097	1153	1241	4097A	B		121950	W012.5	4099	1438	1618	4099A	B
4098	1340	1428	4098A	B		140706	W039.3	4100	1623	1800	4100A	B
4099	1527	1616	4099A	B		155423	W066.1	4101	1805	1942	4101A	B
4100	1714	1800	4100A	B		174139	W092.9	4102	1949	2129	4102A	B
4101	1902	1942	4101A	B		192856	W119.8	4103	2135	2321	4103A	B
4102	2049	2129	4102A	B		211612	W146.6					
4103	2236	2321	4103A	B		230329	W173.4					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4091	0208	0256	4093R	B		022947	W045.0	0207	0410	4093R	B	
4092	0345	0409	4093R	B		041703	W071.8	0553	0730	4094A	B	
4093	0553	0631	4094A	B		060420	W098.6	0734	0916	4095A	B	
4094	0719	0729	4094A	B		075136	W125.4	0921	1107	4096A	B	
4094	0735	0818	4095A	B				1111	1250	4097A	B	
4095	0907	0916	4095A	B		093853	W152.3	1254	1433	4098A	B	
4095	0921	1005	4096A	B				1437	1618	4099A	B	
4096	1054	1106	4096A	B		112609	W179.1	1623	1800	4100A	B	
4096	1112	1153	4097A	B				1805	1943	4101A	B	
4097	1241	1249	4097A	B		131326	E154.1	1947	2130	4102A	B	
4097	1254	1340	4098A	B				2135	2321	4103A	B	
4098	1438	1527	4099A	B		150042	E127.3					
4099	1623	1714	4100A	B		164759	E100.5					
4100	1805	1902	4101A	B		183515	E073.6					
4101	1951	2049	4102A	B		202232	E046.8					
4102	2138	2236	4103A	B		220948	E020.0					
4103						235705	W006.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
13 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4104						005045	E159.8	4106	0404	0503	4106R	B
4105						023802	E133.0	4107	0509	0650	4107R	B
4106	0404	0447	4106R	B		042518	E106.2	4108	0655	0831	4108A	B
4107	0545	0634	4107R	B		061235	E079.3	4109	0835	1018	4109A	B
4108	0733	0821	4108A	B		075951	E052.5	4110	1025	1207	4110A	B
4109	0920	1008	4109A	B		094708	E025.7	4111	1213	1344	4111A	B
4110	1107	1156	4110A	B		113424	W001.1	4112	1354	1533	4112A	B
4111	1254	1343	4111A	B		132141	W027.9	4113	1537	1715	4113A	B
4112	1442	1530	4112A	B		150857	W054.8	4114	1720	1858	4114A	B
4113	1629	1715	4113A	B		165614	W081.6	4115	1904	2045	4115A	B
4114	1816	1857	4114A	B		184330	W108.4	4116	2050	2236	4116A	B
4115	2003	2045	4115A	B		203047	W135.2					
4116	2151	2236	4116A	B		221803	W162.0					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4104						014421	W033.6	0404	0503	4106R	B	
4105						033138	W060.5	0508	0651	4107R	B	
4106	0447	0502	4106R	B		051854	W087.3	0656	0831	4108A	B	
4106	0509	0545	4107R	B				0836	1018	4109A	B	
4107	0634	0650	4107R	B		070611	W114.1	1025	1207	4110A	B	
4107	0656	0733	4108A	B				1211	1349	4111A	B	
4108	0821	0830	4108A	B		085327	W140.9	1354	1533	4112A	B	
4108	0836	0920	4109A	B				1538	1716	4113A	B	
4109	1008	1017	4109A	B		104044	W167.7	1721	1858	4114A	B	
4109	1024	1107	4110A	B				1903	2046	4115A	B	
4110	1156	1206	4110A	B		122800	E165.5	2050	2237	4116A	P	
4110	1212	1254	4111A	B								
4111	1343	1348	4111A	B		141517	E138.7					
4111	1354	1442	4112A	B								
4112	1538	1629	4113A	B		160233	E111.8					
4113	1721	1816	4114A	B		174950	E085.0					
4114	1905	2003	4115A	B		193706	E058.2					
4115	2052	2151	4116A	B		212423	E031.4					
4116	2239	2338	4122A	A		231139	E004.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
14 OCTOBER 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4117	2338	0026	4122A	A			000520	E171.1	4117	2238	0036	4122A	A
4118							015236	E144.3	4119	0224	0419	4119R	B
4119	0312	0401	4119R	B			033953	E117.5	4121	0611	0744	4121A	B
4120	0500	0548	4120R	B			052709	E090.7	4122	0749	0930	4122A	B
4121	0647	0736	4121A	B			071426	E063.9	4123	0937	1120	4123A	B
4122	0834	0923	4122A	B			090142	E037.0	4124	1125	1307	4124A	B
4123	1022	1110	4123A	B			104859	E010.2	4125	1312	1450	4125A	B
4124	1209	1257	4124A	B			123616	W016.6	4126	1455	1630	4126A	B
4125	1356	1445	4125A	B			142332	W043.4	4127	1635	1813	4127A	B
4126	1543	1630	4126A	B			161049	W070.2	4128	1820	2000	4128A	B
4127	1731	1813	4127A	B			175805	W097.1	4129	2005	2148	4129A	B
4128	1918	1959	4128A	B			194522	W123.9					
4129	2105	2148	4129A	B			213238	W150.7					
4130							231955	W177.5					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4117	0026	0035	4122A	A			005856	W022.3	2238	0037	4122A	A	
4118	0224	0312	4119R	B			024612	W049.1	0225	0419	4119R	B	
4119	0401	0418	4119R	B			043329	W075.9	0423	0604	4120R	B	
4119	0424	0500	4120R	B					0611	0745	4121A	B	
4120	0548	0603	4120R	B			062045	W102.7	0749	0930	4122A	B	
4120	0611	0647	4121A	B					0935	1121	4123A	B	
4121	0736	0744	4121A	B			080802	W129.5	1125	1307	4124A	B	
4121	0749	0834	4122A	B					1312	1450	4125A	B	
4122	0923	0929	4122A	B			095518	W156.3	1455	1631	4126A	B	
4122	0935	1022	4123A	B					1635	1814	4127A	B	
4123	1110	1119	4123A	B			114235	E176.8	1818	2000	4128A	B	
4123	1125	1209	4124A	B					2005	2149	4129A	B	
4124	1257	1306	4124A	B			132951	E150.0					
4124	1312	1356	4125A	B									
4125	1455	1543	4126A	B			151708	E123.2					
4126	1636	1731	4127A	B			170424	E096.4					
4127	1819	1918	4128A	B			185141	E069.6					
4128	2006	2105	4129A	B			203857	E042.7					
4129							222614	E015.9					
4130							001330	W010.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
15 OCTOBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		TIME	LONG				INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		HRMNSS	DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4131							010711	E155.7	4132	0138	0327	4133R	A
4132	0227	0315	4133R	A			025428	E128.9	4133	0327	0519	4133R	B
4133	0414	0503	4133R	B			044144	E102.1	4134	0525	0707	4134R	B
4134	0601	0650	4134R	B			062901	E075.2	4135	0713	0847	4135A	B
4135	0749	0837	4135A	B			081617	E048.4	4136	0852	1035	4136A	B
4136	0936	1025	4136A	B			100334	E021.6	4137	1040	1216	4137A	B
4137	1123	1212	4137A	B			115050	W005.2	4138	1223	1403	4138A	B
4138	1311	1359	4138A	B			133807	W032.1	4139	1409	1547	4139A	B
4139	1458	1546	4139A	B			152523	W058.9	4140	1552	1732	4140A	B
4140	1645	1730	4140A	B			171240	W085.7	4141	1737	1915	4141A	B
4141	1832	1915	4141A	B			185956	W112.5	4142	1921	2103	4142A	B
4142	2020	2102	4142A	B			204713	W139.4	4143	2108	2250	4143A	B
4143	2207	2250	4143A	B			223429	W166.1					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4131	0139	0227	4133R	A			020047	W037.7	0139	0327	4133R	A	
4132	0315	0327	4133R	A			034803	W064.5	0327	0519	4133R	B	
4132	0328	0414	4133R	B					0524	0707	4134R	B	
4133	0503	0518	4133R	B			053520	W091.4	0713	0848	4135A	B	
4133	0524	0601	4134R	B					0852	1036	4136A	B	
4134	0650	0707	4134R	B			072236	W118.2	1041	1218	4137A	B	
4134	0713	0749	4135A	B					1223	1403	4138A	B	
4135	0837	0847	4135A	B			090953	W145.0	1409	1547	4139A	B	
4135	0852	0936	4136A	B					1552	1733	4140A	B	
4136	1025	1035	4136A	B			105709	W171.8	1737	1916	4141A	B	
4136	1041	1123	4137A	B					1921	2103	4142A	B	
4137	1212	1217	4137A	B			124426	E161.4	2108	2251	4143A	B	
4137	1223	1311	4138A	B									
4138	1409	1458	4139A	B			143142	E134.5					
4139	1552	1645	4140A	B			161859	E107.7					
4140	1737	1832	4141A	B			180615	E080.9					
4141	1921	2020	4142A	B			195332	E054.1					
4142	2108	2207	4143A	B			214048	E027.3					
4143							232805	E000.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
16 OCTOBER 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4144						002146	E167.0	4145	0053	0245	4146R	A
4145	0141	0230	4146R	A		020902	E140.2	4146	0241	0434	4146R	B
4146	0329	0417	4146R	B		035619	E113.4	4147	0440	0623	4147R	B
4147	0516	0605	4147R	B		054335	E086.6	4148	0628	0803	4148A	B
4148	0703	0752	4148A	B		073052	E059.8	4149	0808	0948	4149A	B
4149	0851	0939	4149A	B		091808	E032.9	4150	0953	1137	4150A	B
4150	1038	1126	4150A	B		110525	E006.1	4151	1142	1320	4151A	B
4151	1225	1314	4151A	B		125241	W020.7	4152	1325	1506	4152A	B
4152	1412	1501	4152A	B		143958	W047.5	4153	1511	1648	4153A	B
4153	1600	1648	4153A	B		162714	W074.3	4154	1653	1830	4154A	B
4154	1747	1825	4154A	B		181431	W101.2	4155	1836	2018	4155A	B
4155	1934	2017	4155A	B		200147	W128.0	4156	2022	2207	4156A	B
4156	2121	2206	4156A	B		214904	W154.8	4157	2207	0007	4160R	A
4157	2309	2357	4160R	A		233620	E178.4					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4144	0054	0141	4146R	A		011521	W026.4		0054	0245	4146R	A
4145	0230	0245	4146R	A		030238	W053.2		0241	0434	4146R	B
4145	0241	0329	4146R	B					0440	0623	4147R	B
4146	0417	0434	4146R	B		044954	W080.0		0628	0803	4148A	B
4146	0440	0516	4147R	B					0808	0948	4149A	B
4147	0605	0622	4147R	B		063711	W106.8		0953	1138	4150A	B
4147	0628	0703	4148A	B					1142	1320	4151A	B
4148	0752	0803	4148A	B		082427	W133.6		1325	1506	4152A	B
4148	0808	0851	4149A	B					1511	1649	4153A	B
4149	0939	0947	4149A	B		101144	W160.4		1653	1830	4154A	B
4149	0953	1038	4150A	B					1835	2018	4155A	B
4150	1126	1137	4150A	B		115900	E172.7		2023	2207	4156A	B
4150	1143	1225	4151A	B					2207	0006	4160R	A
4151	1314	1319	4151A	B		134617	E145.9					
4151	1325	1412	4152A	B								
4152	1511	1600	4153A	B		153333	E119.1					
4153	1653	1747	4154A	B		172050	E092.3					
4154	1835	1934	4155A	B		190806	E065.5					
4155	2023	2121	4156A	B		205523	E038.6					
4156	2210	2309	4160R	A		224239	E011.8					
4157	2357	0006	4160R	A		002956	W015.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
17 OCTOBER 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4158						012337	E151.6	4159	0155	0353	4159R	B
4159	0243	0332	4159R	B		031053	E124.7	4160	0358	0534	4160R	B
4160	0430	0519	4160R	B		045810	E097.9	4161	0541	0718	4161A	B
4161	0618	0706	4161A	B		064526	E071.1	4162	0723	0904	4162A	B
4162	0805	0854	4162A	B		083243	E044.3	4163	0909	1053	4163A	B
4163	0952	1041	4163A	B		101959	E017.5	4164	1057	1240	4164A	B
4164	1140	1228	4164A	B		120716	W009.3	4165	1245	1422	4165A	B
4165	1327	1415	4165A	B		135432	W036.2	4166	1427	1604	4166A	B
4166	1514	1603	4166A	B		154149	W063.0	4167	1609	1748	4167A	B
4167	1701	1747	4167A	B		172905	W089.8	4168	1753	1930	4168A	B
4168	1849	1930	4168A	B		191622	W116.6	4169	1936	2119	4169A	B
4169	2036	2118	4169A	B		210338	W143.4	4170	2124	2306	4170A	B
4170	2223	2305	4170A	B		225055	W170.3					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4158	0155	0243	4159R	B		021712	W041.8	0155	0353	4159R	B	
4159	0332	0352	4159R	B		040429	W068.6	0358	0534	4160R	B	
4159	0359	0430	4160R	B				0539	0718	4161A	B	
4160	0519	0534	4160R	B		055145	W095.5	0723	0904	4162A	B	
4160	0539	0618	4161A	B				0909	1053	4163A	B	
4161	0706	0717	4161A	B		073902	W122.3	1058	1240	4164A	B	
4161	0723	0805	4162A	B				1245	1422	4165A	B	
4162	0854	0903	4162A	B		092618	W149.1	1427	1604	4166A	B	
4162	0909	0952	4163A	B				1609	1748	4167A	B	
4163	1041	1052	4163A	B		111335	W175.9	1753	1930	4168A	B	
4163	1058	1140	4164A	B				1935	2119	4169A	B	
4164	1228	1239	4164A	B		130051	E157.3	2124	2306	4170A	B	
4164	1245	1327	4165A	B								
4165	1415	1421	4165A	B		144808	E130.4					
4165	1427	1514	4166A	B								
4166	1609	1701	4167A	B		163524	E103.6					
4167	1753	1849	4168A	B		182241	E076.8					
4168	1937	2036	4169A	B		200957	E050.0					
4169	2124	2223	4170A	B		215714	E023.2					
4170						234430	W003.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
18 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4171						003811	E162.9	4172	0110	0301	4173R	A
4172	0158	0246	4173R	A		022528	E136.1	4173	0256	0450	4173R	B
4173	0345	0433	4173R	B		041244	E109.3	4174	0456	0641	4174R	B
4174	0532	0621	4174R	B		060001	E082.5	4175	0645	0818	4175A	B
4175	0719	0808	4175A	B		074717	E055.7	4176	0823	1007	4176A	B
4176	0907	0955	4176A	B		093434	E028.8	4177	1012	1155	4177A	B
4177	1054	1143	4177A	B		112150	E002.0	4178	1159	1335	4178A	B
4178	1241	1330	4178A	B		130907	W024.8	4179	1342	1521	4179A	B
4179	1429	1517	4179A	B		145623	W051.6	4180	1526	1703	4180A	B
4180	1616	1702	4180A	B		164340	W078.4	4181	1707	1848	4181A	B
4181	1803	1848	4181A	B		183056	W105.3	4182	1853	2033	4182A	B
4182	1950	2034	4182A	B		201813	W132.1	4183	2058	2223	4183A	B
4183	2138	2223	4183A	B		220529	W158.9	4184	2224	0023	4187R	A
4184	2325	0013	4187R	A		235246	E174.3					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4171	0109	0158	4173R	A		013147	W030.5	0110	0301	4173R	A	
4172	0246	0300	4173R	A		031903	W057.3	0257	0450	4173R	B	
4172	0257	0345	4173R	B				0455	0641	4174R	B	
4173	0433	0449	4173R	B		050620	W084.1	0646	0818	4175A	B	
4173	0455	0532	4174R	B				0823	1007	4176A	B	
4174	0621	0640	4174R	B		065336	W110.9	1013	1154	4177A	B	
4174	0646	0719	4175A	B				1159	1336	4178A	B	
4175	0808	0818	4175A	B		084053	W137.8	1342	1521	4179A	B	
4175	0823	0907	4176A	B				1526	1703	4180A	B	
4176	0955	1007	4176A	B		102809	W164.6	1707	1849	4181A	B	
4176	1013	1054	4177A	B				1853	2034	4182A	B	
4177	1143	1153	4177A	B		121526	E168.6	2040	2223	4183A	B	
4177	1159	1241	4178A	B				2225	0023	4187R	A	
4178	1342	1429	4179A	B		140242	E141.8					
4179	1526	1616	4180A	B		154959	E115.0					
4180	1707	1803	4181A	B		173715	E088.1					
4181	1853	1950	4182A	B		192432	E061.3					
4182	2040	2138	4183A	B		211148	E034.5					
4183	2226	2325	4187R	A		225905	E007.7					
4184	0013	0023	4187R	A		004621	W019.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
19 OCTOBER 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4185						014002	E147.5	4186	0211	0407	4186R	B
4186	0259	0348	4186R	B		032719	E120.6	4187	0412	0550	4187R	B
4187	0447	0535	4187R	B		051435	E093.8	4188	0557	0734	4188A	B
4188	0634	0722	4188A	B		070152	E067.0	4189	0739	0922	4189A	B
4189	0821	0910	4189A	B		084908	E040.2	4190	0926	1110	4190A	B
4190	1008	1057	4190A	B		103625	E013.4	4191	1115	1255	4191A	B
4191	1156	1244	4191A	B		122341	W013.5	4192	1300	1436	4192A	B
4192	1343	1432	4192A	B		141058	W040.3	4193	1441	1620	4193A	B
4193	1530	1619	4193A	B		155814	W067.1	4194	1625	1803	4194A	B
4194	1718	1802	4194A	B		174531	W093.9	4195	1807	1949	4195A	B
4195	1905	1949	4195A	B		193247	W120.7	4196	1954	2135	4196A	B
4196	2052	2135	4196A	B		212004	W147.6					
4197						230720	W174.4					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4185	0211	0259	4186R	B		023338	W045.9		0210	0406	4186R	B
4186	0348	0406	4186R	B		042054	W072.8		0412	0551	4187R	B
4186	0412	0447	4187R	B					0556	0734	4188A	B
4187	0535	0551	4187R	B		060811	W099.6		0739	0922	4189A	B
4187	0556	0634	4188A	B					0926	1111	4190A	B
4188	0722	0734	4188A	B		075527	W126.4		1115	1255	4191A	B
4188	0739	0821	4189A	B					1300	1436	4192A	B
4189	0910	0921	4189A	B		094244	W153.2		1441	1620	4193A	B
4189	0926	1008	4190A	B					1625	1803	4194A	B
4190	1057	1110	4190A	B		112960	E180.0		1807	1949	4195A	B
4190	1115	1156	4191A	B					1954	2135	4196A	B
4191	1244	1254	4191A	B		131716	E153.2					
4191	1300	1343	4192A	B								
4192	1441	1530	4193A	B		150433	E126.3					
4193	1625	1718	4194A	B		165149	E099.5					
4194	1808	1905	4195A	B		183906	E072.7					
4195	1954	2052	4196A	B		202622	E045.9					
4196						221339	E019.1					
4197						000055	W007.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
20 OCTOBER 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4198							005437	E158.8	4199	0126	0315	4200R	A
4199	0214	0302	4200R	A			024153	E132.0	4200	0313	0507	4200R	B
4200	0401	0450	4200R	B			042910	E105.2	4201	0512	0655	4201R	B
4201	0548	0637	4201R	B			061627	E078.3	4202	0701	0834	4202A	B
4202	0736	0824	4202A	B			080343	E051.5	4203	0839	1022	4203A	B
4203	0923	1011	4203A	B			095100	E024.7	4204	1027	1212	4204A	B
4204	1110	1159	4204A	B			113816	W002.1	4205	1216	1355	4205A	B
4205	1257	1346	4205A	B			132533	W028.9	4206	1400	1537	4206A	B
4206	1445	1533	4206A	B			151249	W055.8	4207	1542	1721	4207A	B
4207	1632	1720	4207A	B			170006	W082.6	4208	1726	1903	4208A	B
4208	1819	1902	4208A	B			184722	W109.4	4209	1908	2049	4209A	B
4209	2007	2048	4209A	B			203439	W136.2	4210	2054	2240	4210A	B
4210	2154	2239	4210A	B			222155	W163.0					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4198	0126	0214	4200R	A			014812	W034.6	0126	0315	4200R	A	
4199	0302	0315	4200R	A			033528	W061.4	0313	0507	4200R	B	
4199	0314	0401	4200R	B					0513	0656	4201R	B	
4200	0450	0507	4200R	B			052245	W088.2	0701	0835	4202A	B	
4200	0512	0548	4201R	B					0839	1022	4203A	B	
4201	0637	0655	4201R	B			071001	W115.0	1027	1211	4204A	B	
4201	0701	0736	4202A	B					1216	1355	4205A	B	
4202	0824	0833	4202A	B			085718	W141.8	1400	1537	4206A	B	
4202	0840	0923	4203A	B					1542	1721	4207A	B	
4203	1011	1021	4203A	B			104434	W168.7	1726	1903	4208A	B	
4203	1027	1110	4204A	B					1907	2049	4209A	B	
4204	1159	1210	4204A	B			123151	E164.5	2054	2240	4210A	B	
4204	1216	1257	4205A	B									
4205	1346	1354	4205A	B			141907	E137.7					
4205	1400	1445	4206A	B									
4206	1542	1632	4207A	B			160624	E110.9					
4207	1726	1819	4208A	B			175340	E084.1					
4208	1908	2007	4209A	B			194057	E057.2					
4209	2055	2154	4210A	B			212813	E030.4					
4210	2242	2341	4214R	A			231530	E003.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
21 OCTOBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
	11.5 + 6.7		INT ORBIT +	H D R	THIR GRID CORR		TIME	LONG				INT ORBIT +	H D R
DATA ORBIT	ON HRMN	OFF HRMN	STDN	S	LALO		HRMNSS	DEG	DATA ORBIT	ON HRMN	OFF HRMN	STDN	S
	DAYTIME THIR						ASC. NODE						
4211	2341	0030	4214R	A			000912	E170.2	4211	2241	0039	4214R	A
4212							015628	E143.4	4213	0227	0422	4213R	B
4213	0316	0404	4213R	B			034345	E116.5	4214	0431	0609	4214R	B
4214	0503	0551	4214R	B			053101	E089.7	4215	0614	0751	4215A	B
4215	0650	0739	4215A	B			071818	E062.9	4216	0755	0936	4216A	B
4216	0837	0926	4216A	B			090534	E036.1	4217	0941	1126	4217A	B
4217	1025	1113	4217A	B			105251	E009.3	4218	1131	1312	4218A	B
4218	1212	1301	4218A	B			124007	W017.6	4219	1317	1453	4219A	B
4219	1359	1448	4219A	B			142724	W044.4	4220	1458	1639	4220A	B
4220	1547	1635	4220A	B			161440	W071.2	4221	1643	1819	4221A	B
4221	1734	1818	4221A	B			180157	W098.0	4222	1823	2004	4222A	B
4222	1921	2003	4222A	B			194913	W124.8	4223	2009	2154	4223A	B
4223	2108	2153	4223A	B			213630	W151.6					
4224							232346	W178.5					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4211	0030	0039	4214R	A			010246	W023.2	2241	0039	4214R	A	
4212	0227	0316	4213R	B			025003	W050.0	0228	0422	4213R	B	
4213	0404	0425	4213R	B			043719	W076.9	0431	0609	4214R	B	
4213	0431	0503	4214R	B					0614	0750	4215A	B	
4214	0551	0609	4214R	B			062436	W103.7	0755	0936	4216A	B	
4214	0614	0650	4215A	B					0941	1126	4217A	B	
4215	0739	0749	4215A	B			081152	W130.5	1132	1312	4218A	B	
4215	0755	0837	4216A	B					1317	1453	4219A	B	
4216	0926	0936	4216A	B			095909	W157.3	1458	1639	4220A	B	
4216	0941	1025	4217A	B					1643	1818	4221A	B	
4217	1113	1126	4217A	B			114625	E175.9	1823	2004	4222A	B	
4217	1132	1212	4218A	B					2009	2153	4223A	B	
4218	1301	1311	4218A	B			133342	E149.0					
4218	1317	1359	4219A	B									
4219	1459	1547	4220A	B			152058	E122.2					
4220	1643	1734	4221A	B			170815	E095.4					
4221	1823	1921	4222A	B			185531	E068.6					
4222	2010	2108	4223A	B			204248	E041.8					
4223							223004	E014.9					
4224							001721	W011.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
22 OCTOBER 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4225							011103	E154.7	4226	0142	0342	4227R	A
4226	0230	0319	4227R	A			025819	E127.9	4227	0340	0523	4227R	B
4227	0417	0506	4227R	B			044536	E101.1	4228	0529	0710	4228R	B
4228	0605	0653	4228A	B			063252	E074.3	4229	0716	0851	4229A	B
4229	0752	0840	4229A	B			082009	E047.4	4230	0855	1041	4230A	B
4230	0939	1028	4230A	B			100725	E020.6	4231	1045	1227	4231A	B
4231	1126	1215	4231A	B			115442	W006.2	4232	1231	1409	4232A	B
4232	1314	1402	4232A	B			134158	W033.0	4233	1414	1551	4233A	B
4233	1501	1550	4233A	B			152915	W059.8	4234	1555	1733	4234A	B
4234	1648	1733	4234A	B			171631	W086.7	4235	1739	1919	4235A	B
4235	1836	1919	4235A	B			190348	W113.5	4236	1927	2106	4236A	B
4236	2023	2105	4236A	B			205104	W140.3	4237	2111	2253	4237A	B
4237	2210	2252	4237A	B			223821	W167.1					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4225	0143	0230	4227R	A			020437	W038.7		0143	0341	4227R	A
4226	0319	0341	4227R	A			035154	W065.5		0341	0523	4227R	B
4226	0341	0417	4227R	B						0528	0710	4228R	B
4227	0506	0522	4227R	B			053910	W092.3		0716	0851	4229A	B
4227	0528	0605	4228A	B						0855	1041	4230A	B
4228	0653	0710	4228A	B			072627	W119.2		1045	1227	4231A	B
4228	0715	0752	4229A	B						1238	1409	4232A	B
4229	0840	0850	4229A	B			091343	W146.0		1414	1551	4233A	B
4229	0856	0939	4230A	B						1556	1733	4234A	B
4230	1028	1040	4230A	B			110100	W172.8		1738	1919	4235A	B
4230	1045	1126	4231A	B						1924	2106	4236A	B
4231	1215	1226	4231A	B			124816	E160.4		2111	2253	4237A	B
4231	1232	1314	4232A	B									
4232	1402	1408	4232A	B			143533	E133.6					
4232	1414	1501	4233A	B									
4233	1556	1648	4234A	B			162249	E106.8					
4234	1738	1836	4235A	B			181006	E079.9					
4235	1924	2023	4236A	B			195722	E053.1					
4236	2111	2210	4237A	B			214439	E026.3					
4237	2259	2357	4240R	A			233155	W000.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
23 OCTOBER 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4238	2357	0046	4240R	A			002537	E166.1	4238	2258	0057	4240R	A
4239							021254	E139.2	4240	0244	0438	4240R	B
4240	0332	0420	4240R	B			040010	E112.4	4241	0444	0625	4241R	B
4241	0519	0608	4241R	B			054727	E085.6	4242	0630	0807	4242A	B
4242	0706	0755	4242A	B			073443	E058.8	4243	0812	0954	4243A	B
4243	0854	0942	4243A	B			092200	E032.0	4244	0958	1142	4244A	B
4244	1041	1129	4244A	B			110916	E005.1	4245	1146	1327	4245A	B
4245	1228	1317	4245A	B			125633	W021.7	4246	1332	1510	4246A	B
4246	1415	1504	4246A	B			144349	W048.5	4247	1514	1652	4247A	B
4247	1603	1650	4247A	B			163106	W075.3	1248	1656	1834	4248A	B
4248	1750	1830	4248A	B			181822	W102.1	4249	1840	2021	4249A	B
4249	1937	2020	4249A	B			200539	W129.0	4250	2027	2214	4250A	B
4250	2125	2213	4250A	B			215255	W155.8					
4251							234012	E177.4					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4238	0046	0057	4240R	A			011912	W027.4	2258	0057	4240R	A	
4239	0244	0332	4240R	B			030628	W054.2	0245	0438	4240R	B	
4240	0420	0438	4240R	B			045345	W081.0	0444	0626	4241R	B	
4240	0444	0519	4241R	B					0631	0807	4242A	B	
4241	0608	0625	4241R	B			064101	W107.8	0812	0953	4243A	B	
4241	0631	0706	4242A	B					0958	1141	4244A	B	
4242	0755	0806	4242A	B			082818	W134.6	1146	1327	4245A	B	
4242	0812	0854	4243A	B					1333	1510	4246A	B	
4243	0942	0952	4243A	B			101534	W161.4	1515	1651	4247A	B	
4243	0958	1041	4244A	B					1656	1834	4248A	B	
4244	1129	1141	4244A	B			120251	E171.8	1839	2021	4249A	B	
4244	1146	1228	4245A	B					2027	2214	4250A	B	
4245	1317	1327	4245A	B			135007	E145.0					
4245	1333	1415	4246A	B									
4246	1515	1603	4247A	B			153724	E118.1					
4247	1656	1750	4248A	B			172440	E091.3					
4248	1839	1937	4249A	B			191157	E064.5					
4249	2028	2125	4250A	B			205913	E037.7					
4250							224630	E010.9					
4251	0013	0059	4254R	A			003346	W016.0					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
24 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4252	0059	0148	4254R	A		012728	E150.6	4252	0012	0204	4254R	A
4253	0246	0335	4253R	B		031445	E123.8	4253	0158	0356	4253R	B
4254	0434	0522	4254R	B		050201	E097.0	4254	0401	0539	4254R	B
4255	0621	0709	4255A	B		064918	E070.2	4255	0545	0721	4255A	B
4256	0808	0857	4256A	B		083634	E043.3	4256	0726	0907	4256A	B
4257	0955	1044	4257A	B		102351	E016.5	4257	0912	1058	4257A	B
4258	1143	1231	4258A	B		121107	W010.3	4258	1102	1243	4258A	B
4259	1330	1418	4259A	B		135824	W037.1	4259	1247	1426	4259A	B
4260	1517	1606	4260A	B		154540	W063.9	4260	1431	1607	4260A	B
4261	1704	1750	4261A	B		173257	W090.8	4261	1613	1752	4261A	B
4262	1852	1936	4262A	B		192013	W117.6	4262	1755	1937	4262A	B
4263	2039	2121	4263A	B		210730	W144.4	4263	1940	2120	4263A	B
4264	2226	2312	4264A	B		225446	W171.2	4264	2127	2312	4264A	B
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4252	0148	0207	4254R	A		022103	W042.8	0013	0203	4254R	A	
4252	0158	0246	4253R	B				0158	0356	4253R	B	
4253	0335	0355	4253R	B		040819	W069.6	0401	0539	4254R	B	
4253	0401	0434	4254R	B				0544	0721	4255A	B	
4254	0522	0538	4254R	B		055536	W096.4	0726	0907	4256A	B	
4254	0544	0621	4255A	B				0912	1058	4257A	B	
4255	0709	0720	4255A	B		074252	W123.2	1102	1243	4258A	B	
4255	0726	0808	4256A	B				1247	1426	4259A	B	
4256	0857	0906	4256A	B		093009	W150.1	1431	1608	4260A	B	
4256	0912	0955	4257A	B				1612	1751	4261A	B	
4257	1103	1143	4258A	B		111725	W176.9	1750	1937	4262A	B	
4258	1231	1242	4258A	B		130442	E156.3	2051	2121	4263A	B	
4258	1247	1330	4259A	B				2127	2313	4264A	B	
4259	1418	1425	4259A	B		145158	E129.5					
4259	1431	1517	4260A	B								
4260	1613	1704	4261A	B		163915	E102.7					
4261	1753	1852	4262A	B		182631	E075.8					
4262	1940	2039	4263A	B		201348	E049.0					
4263	2128	2226	4264A	B		220104	E022.2					
4264	2315	0014	4267R	A		234821	W004.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
25 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4265	0014	0102	4267R	A		004203	E162.0	4265	2314	0111	4267R	A
4266						022919	E135.1	4267	0301	0456	4267R	B
4267	0348	0437	4267R	B		041636	E108.3	4268	0501	0643	4268R	B
4268	0535	0624	4268R	B		060352	E081.5	4269	0648	0823	4269A	B
4269	0723	0811	4269A	B		075109	E054.7	4270	0827	1011	4270A	B
4270	0910	0958	4270A	B		093825	E 27.9	4271	1015	1159	4271A	B
4271	1057	1146	4271A	B		112542	E001.0	4272	1204	1342	4272A	B
4272	1244	1333	4272A	B		131258	W025.8	4273	1347	1522	4273A	B
4273	1432	1520	4273A	B		150015	W052.6	4274	1530	1709	4274A	B
4274	1619	1707	4274A	B		164731	W079.4	4275	1714	1851	4275A	B
4275	1806	1850	4275A	B		183448	W106.2	4276	1857	2048	4277A	B
4276	1953	2042	4277A	B		202204	W133.1	4277	2039	2229	4277A	A
4277	2141	2228	4277A	A		220921	W159.9					
4278						235637	E173.3					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4265	0102	0112	4267R	A		013537	W031.4	2314	0111	4267R	A	
4266	0301	0348	4267R	B		032254	W058.3	0301	0455	4267R	B	
4267	0437	0455	4267R	B		051010	W085.1	0501	0643	4268R	B	
4267	0501	0535	4268R	B				0648	0823	4269A	B	
4268	0624	0642	4268R	B		065727	W111.9	0827	1010	4270A	B	
4268	0648	0723	4269A	B				1015	1159	4271A	B	
4269	0811	0822	4269A	B		084443	W138.7	1204	1342	4272A	B	
4269	0827	0910	4270A	B				1347	1525	4273A	B	
4270	0958	1010	4270A	B		103200	W165.5	1530	1525	4274A	B	
4270	1015	1057	4271A	B				1714	1851	4275A	B	
4271	1146	1158	4271A	B		121516	E167.6	1855	2047	4276A	B	
4271	1204	1244	4272A	B				2039	2229	4277A	B	
4272	1333	1341	4272A	B		140633	E140.8					
4272	1347	1432	4273A	B								
4273	1530	1619	4274A	B		155349	E114.0					
4274	1715	1806	4275A	B		174106	E087.2					
4275	1855	1953	4277A	B		192822	E060.4					
4276	2042	2141	4277A	A		211539	E033.5					
4277						230255	E006.7					
4278	0029	0115	4281R	A		005016	W020.1					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
26 OCTOBER 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	ASC. AND DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
4279	0115	0204	4281R	A		014354	E146.5	4279	0028	0222	4281R	A
4280	0303	0351	4280R	B		033110	E119.7	4280	0215	0404	4280R	B
4281	0450	0538	4281R	B		051827	E092.8	4281	0417	0557	4281R	B
4282	0637	0726	4282A	B		070543	E066.0	4282	0601	0738	4282A	B
4283	0824	0913	4283A	B		085300	E039.2	4283	0742	0925	4283A	B
4284	1012	1100	4284A	B		104016	E012.4	4284	0929	1115	4284A	B
4285	1159	1247	4285A	B		122733	W014.4	4285	1119	1256	4285A	B
4286	1346	1435	4286A	B		141450	W041.3	4286	1301	1441	4286A	B
4287	1533	1622	4287A	B		160206	W068.1	4287	1446	1625	4287A	B
4288	1721	1805	4288A	B		174923	W094.9	4288	1630	1806	4288A	B
4289	1908	1952	4289A	B		193639	W121.7	4289	1811	1954	4289A	B
4290	2138	2144	4294R	A		212356	W148.5	4291	2138	2341	4294R	A
4291	2243	2331	4294R	A		231112	W175.3					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4279	0204	0222	4281R	A		023728	W046.9		0029	0222	4281R	A
4279	0216	0303	4280R	B					0215	0404	4280R	B
4280	0351	0411	4280R	B		042445	W073.7		0417	0557	4281R	B
4280	0418	0450	4281R	B					0601	0738	4282A	B
4281	0538	0556	4281R	B		061201	W100.6		0742	0925	4283A	B
4281	0601	0637	4282A	B					0929	1115	4284A	B
4282	0726	0737	4282A	B		075918	W127.4		1119	1257	4285A	B
4282	0742	0824	4283A	B					1301	1441	4286A	B
4283	0913	0924	4283A	B		094634	W154.2		1446	1625	4287A	B
4283	0929	1012	4284A	B					1630	1806	4288A	B
4284	1100	1114	4284A	B		113351	E179.0		1811	1953	4289A	B
4284	1119	1159	4285A	B					2138	2341	4294R	A
4285	1247	1256	4285A	B		132107	E152.2					
4285	1301	1346	4286A	B								
4286	1435	1440	4286A	B		150824	E125.4					
4286	1446	1533	4287A	B								
4287	1630	1721	4288A	B		165540	E098.6					
4288	1811	1908	4289A	B		184256	E071.7					
4289						203013	E044.9					
4290	2144	2243	4294R	A		221729	E018.1					
4291	2331	2340	4294R	A		000446	W008.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
27 OCTOBER 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
DAYTIME THIR						**ASC. NODE**						
4292						005829	E157.8	4294	0319	0510	4294R	B
4293						024545	E131.0	4295	0516	0659	4295R	B
4294	0404	0453	4294R	B		043302	E104.2	4296	0704	0838	4296A	B
4295	0552	0640	4295A	B		062018	E077.4	4297	0842	1026	4297A	B
4296	0739	0827	4296A	B		080735	E050.6	4298	1031	1214	4298A	B
4297	0926	1015	4297A	B		095451	E023.8	4299	1218	1357	4299A	B
4298	1113	1202	4298A	B		114208	W003.1	4300	1401	1542	4300A	B
4299	1301	1349	4299A	B		132924	W029.9	4301	1546	1724	4301A	B
4300	1448	1536	4300A	B		151641	W056.7	4302	1729	1907	4302A	B
4301	1635	1724	4301A	B		170357	W083.5	4303	1912	2055	4303A	B
4302	1822	1906	4302A	B		185114	W110.3	4304	2100	2242	4304A	B
4303	2010	2054	4303A	B		203830	W137.2					
4304	2157	2241	4304A	B		222547	W164.0					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4292						015202	W035.5	0319	0510	4294R	B	
4293	0319	0404	4294R	B		033919	W062.4	0515	0659	4295R	B	
4294	0453	0509	4294R	B		052635	W089.2	0705	0838	4296A	B	
4294	0515	0552	4295A	B				0843	1026	4297A	B	
4295	0640	0659	4295A	B		071352	W116.0	1031	1214	4298A	B	
4295	0704	0739	4296A	B				1218	1357	4299A	B	
4296	0827	0837	4296A	B		090108	W142.8	1401	1542	4300A	B	
4296	0843	0926	4297A	B				1546	1725	4301A	B	
4297	1015	1025	4297A	B		104825	W169.6	1729	1907	4302A	B	
4297	1031	1113	4298A	B				1911	2056	4303A	B	
4298	1202	1213	4298A	B		123541	E163.5	2100	2242	4304A	B	
4298	1218	1301	4299A	B								
4299	1349	1356	4299A	B		142258	E136.7					
4299	1401	1448	4300A	B								
4300	1546	1635	4301A	B		161014	E109.9					
4301	1729	1822	4302A	B		175731	E083.1					
4302	1911	2010	4303A	B		194447	E056.3					
4303	2100	2157	4304A	B		213204	E029.4					
4304						231920	E002.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
28 OCTOBER 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4305						001303	E169.2	4306	0044	0239	4307R	A
4306	0131	0220	4307R	A		020020	E142.4	4307	0231	0426	4307R	B
4307	0319	0407	4307R	B		034736	E115.6	4308	0431	0614	4308R	B
4308	0506	0555	4308R	B		053453	E088.7	4309	0619	0754	4309A	B
4309*	0653	0742	4309A	B		072209	E061.9	4310	0758	0942	4310A	B
4310*	0916	0929	4310A	B		090926	E035.1	4311	0946	1129	4311A	B
4311	1028	1116	4311A	B		105642	E008.3	4312	1134	1315	4312A	B
4312	1215	1304	4312A	B		124359	W018.5	4313	1320	1456	4313A	B
4313	1402	1451	4313A	B		143115	W045.4	4314	1501	1641	4314A	B
4314	1550	1638	4314A	B		161832	W072.2	4315	1646	1822	4315A	B
4315	1737	1821	4315A	B		180548	W099.0	4316	1827	2006	4316A	B
4316	1924	2005	4316A	B		195305	W125.8	4317	2013	2157	4317A	B
4317	2111	2156	4317A	B		214021	W152.6	4318	2159	2359	4321R	A
4318	2259	2347	4321R	A		232738	W179.5					
*NO 6.7 DATA												
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4305	0045	0131	4307R	A		010637	W024.2		0045	0238	4307R	A
4306	0220	0238	4307R	A		025353	W051.0		0231	0426	4307R	B
4306	0231	0319	4307R	B					0431	0614	4308R	B
4307	0407	0426	4307R	B		044110	W077.8		0619	0754	4309A	B
4307	0432	0506	4308R	B					0758	0942	4310A	B
4308	0555	0614	4308R	B		062826	W104.7		0947	1129	4311A	B
4309	0742	0753	4309A	B		061543	W131.5		1134	1315	4312A	B
4310	0929	0941	4310A	B		100259	W158.3		1320	1457	4313A	B
4310	0947	1028	4311A	B					1501	1641	4314A	B
4311	1116	1128	4311A	B		115016	E174.9		1646	1822	4315A	B
4311	1134	1215	4312A	B					1826	2007	4316A	B
4312	1304	1315	4312A	B		133732	E148.1		2011	2157	4317A	B
4312	1320	1402	4313A	B					2159	2358	4321R	A
4313	1501	1550	4314A	B		152449	E121.2					
4314	1646	1737	4315A	B		171205	E094.4					
4315	1826	1924	4316A	B		185922	E067.6					
4316	2021	2211	4317A	B		204638	E040.8					
4317	2200	2259	4321R	A		223355	E014.0					
4318	2347	2358	4321R	A		002111	W012.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
29 OCTOBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4319						011454	E153.7	4320	0146	0344	4320R	B
4320	0233	0322	4320R	B		030211	E126.9	4321	0349	0526	4321R	B
4321	0420	0509	4321R	B		044927	E100.1	4322	0532	0714	4322R	B
4322	0608	0656	4322R	B		063644	E073.3	4323	0720	0858	4323A	B
4323	0755	0844	4323A	B		082400	E046.4	4324	0901	1045	4324A	B
4324	0942	1031	4324A	B		101117	E019.6	4325	1049	1230	4325A	B
4325	1130	1218	4325A	B		115833	W007.2	4326	1234	1412	4326A	B
4326	1317	1405	4326A	B		134550	W034.0	4327	1415	1557	4327A	B
4327	1504	1553	4327A	B		153306	W060.8	4328	1601	1741	4328A	B
4328	1651	1739	4328A	B		172023	W087.7	4329	1745	1923	4329A	B
4329	1839	1920	4329A	B		190739	W114.5	4330	1928	2111	4330A	B
4330	2026	2110	4330A	B		205456	W141.3	4331	2116	2300	4331A	B
4331	2213	2259	4331A	B		224212	W168.1					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4319	0145	0233	4320R	B		020828	W039.7		0145	0343	4320R	B
4320	0322	0343	4320R	B		035544	W066.5		0349	0526	4321R	B
4320	0349	0420	4321R	B					0531	0714	4322R	B
4321	0509	0526	4321R	B		054301	W093.3		0720	0857	4323A	B
4321	0531	0608	4322R	B					0901	1045	4324A	B
4322	0656	0714	4322R	B		073017	W120.1		1049	1230	4325A	B
4322	0720	0755	4323A	B					1234	1411	4326A	B
4323	0844	0856	4323A	B		091734	W147.0		1415	1556	4327A	B
4323	0901	0942	4324A	B					1601	1740	4328A	B
4324	1031	1043	4324A	B		110450	W173.8		1745	1922	4329A	B
4324	1049	1130	4325A	B					1927	2111	4330A	B
4325	1218	1229	4325A	B		125207	E159.4		2115	2259	4331A	B
4325	1234	1317	4326A	B								
4326	1415	1504	4327A	B		143923	E132.6					
4327	1601	1651	4328A	B		162640	E105.8					
4328	1745	1839	4329A	B		181356	E079.0					
4329	1927	2026	4330A	B		200113	E052.1					
4330	2116	2213	4331A	B		214829	E025.4					
4331						233546	W001.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
30 OCTOBER 1973

THIR						ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID	DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR					ASC. NODE						
4332						002929	E165.1	4333	0101	0252	4334R	A
4333	0148	0236	4334R	A		021645	E138.3	4334	0247	0446	4334R	B
4334	0335	0423	4335R	B		040402	E111.4	4335	0451	0632	4335R	B
4335	0522	0611	4335R	B		055118	E084.6	4336	0638	0810	4336A	B
4336	0710	0758	4336A	B		073835	E057.8	4337	0814	0959	4337A	B
4337	0857	0945	4337A	B		092551	E031.0	4338	1003	1143	4338A	B
4338	1044	1133	4338A	B		111308	E004.2	4339	1151	1328	4339A	B
4339	1231	1320	4339A	B		130024	W022.7	4340	1333	1513	4340A	B
4340	1419	1507	4340A	B		144741	W049.5	4341	1518	1645	4341A	B
4341	1606	1654	4341A	B		163457	W076.3	4342	1702	1839	4342A	B
4342	1753	1838	4342A	B		182214	W103.1	4343	1843	2034	4344A	B
4343	1940	2029	4343A	B		200930	W129.9	4344	2025	2214	4344A	A
4344	2128	2213	4344A	A		215647	W156.7	4345	2219	0019	4348R	A
4345	2315	0003	4348R	A		234403	E176.5					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4332	0101	0148	4334R	A		012302	W028.3	0101	0252	4334R	A	
4333	0236	0252	4334R	A		031019	W055.1	0247	0446	4334R	B	
4333	0247	0335	4335R	B				0451	0633	4335R	B	
4334	0423	0445	4335R	B		045735	W081.9	0638	0810	4336A	B	
4334	0451	0522	4335R	B				0814	0958	4337A	B	
4335	0611	0633	4335R	B		064452	W108.8	1003	1143	4338A	B	
4335	0638	0710	4336A	B				1151	1328	4339A	B	
4336	0758	0809	4336A	B		083208	W135.6	1333	1513	4340A	B	
4336	0814	0857	4337A	B				1518	1657	4341A	B	
4337	0945	0958	4337A	B		101925	W162.4	1702	1839	4342A	B	
4337	1003	1044	4338A	B				1843	2035	4344A	B	
4338	1133	1145	4338A	B		120641	E170.8	2025	2214	4344A	A	
4338	1151	1231	4339A	B				2219	0019	4348R	A	
4339	1320	1327	4339A	B		135358	E144.0					
4339	1333	1419	4340A	B								
4340	1518	1606	4341A	B		154114	E117.2					
4341	1702	1753	4342A	B		172831	E090.3					
4342	1843	1940	4343A	B		191547	E063.5					
4343	2029	2128	4344A	A		210304	E036.7					
4344	2219	2315	4348R	A		225020	E009.9					
4345	0003	0018	4348R	A		003737	W016.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
31 OCTOBER 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4346						013120	E149.6	4347	0203	0358	4347R	B
4347	0249	0338	4347R	B		031836	E122.8	4348	0404	0543	4348R	B
4348	0437	0525	4348R	B		050553	E096.0	4349	0548	0725	4349A	B
4349	0624	0713	4349A	B		065309	E069.2	4350	0730	0913	4350A	B
4350	0811	0900	4350A	B		084026	E042.4	4351	0917	1059	43511	2
4351	0959	1047	4351A	B		102742	E015.5	4352	1103	1245	4352A	B
4352	1146	1234	4352A	B		121459	W011.3	4353	1249	1429	4353A	B
4353	1333	1419	4353A	B		140215	W038.1	4354	1435	1610	4354A	B
4354	1520	1609	4354A	B		154932	W064.9	4355	1619	1754	4355A	B
4355	1708	1753	4355A	B		173648	W091.7	4356	1759	1941	4356A	B
4356	1855	1940	4356A	B		192405	W118.6	4357	1946	2126	4357A	B
4357	2042	2125	4357A	B		211121	W145.4	4358	2131	2308	4358A	B
4358	2229	2313	4358A	B		225838	W172.2					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4346	0202	0249	4347R	B		022453	W043.8		0202	0358	4347R	B
4347	0338	0357	4347R	B		041210	W070.6		0404	0543	4348R	B
4347	0404	0437	4348R	B					0548	0725	4349A	B
4348	0525	0542	4348R	B		055926	W097.4		0730	0913	4350A	B
4348	0548	0624	4349A	B					0917	1059	4351A	B
4349	0713	0724	4349A	B		074643	W124.2		1103	1245	4352A	B
4349	0730	0811	4350A	B					1249	1429	4353A	B
4350	0900	0912	4350A	B		093359	W151.0		1435	1614	4354A	B
4350	0917	0959	4351A	B					1619	1753	4355A	B
4351	1047	1058	4351A	B		112116	W177.9		1758	1941	4356A	B
4351	1104	1146	4352A	B					1946	2126	4357A	B
4352	1234	1244	4352A	B		130832	E155.3		2131	2308	4358A	B
4352	1249	1333	4353A	B								
4353*	1435	1520	4354A	B		145549	E128.5					
4354	1619	1708	4355A	B		164305	E101.7					
4355	1758	1855	4356A	B		183022	E074.9					
4356	1946	2042	4357A	B		201738	E048.0					
4357	2131	2229	4358A	B		220455	E021.2					
4358						235211	W005.6					
*ADDITIONAL 6.7 DATA												
4353	1422	1429	4353A	B								

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
1 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4359						004554	E161.0	4360	0119	0308	4362R	A
4360	0204	0252	4362R	A		023311	E134.2	4362	0500	0645	4362R	B
4361						042027	E107.3	4363	0649	0825	4363A	B
4362	0538	0627	4362R	B		060744	E080.5	4364	0830	1013	4364A	B
4363	0726	0814	4363A	B		075500	E053.7	4365	1019	1202	4365A	B
4364	0913	1002	4364A	B		094217	E026.9	4366	1206	1345	4366A	B
4365	1100	1149	4365A	B		112933	E000.1	4367	1350	1528	4367A	B
4366	1248	1336	4366A	B		131650	W026.8	4368	1533	1714	4368A	B
4367	1435	1523	4367A	B		150406	W053.6	4669	1719	1854	4369A	B
4368	1622	1711	4368A	B		165123	W080.4	4370	1859	2038	4370A	B
4369	1809	1853	4369A	B		183839	W107.2	4371	2046	2231	4371A	B
4370	1957	2040	4370A	B		202556	W134.0					
4371	2144	2230	4371A	B		221312	W160.9					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4359	0118	0204	4362R	A		013928	W032.4	0118	0308	4362R	A	
4360	0252	0307	4362R	A		032644	W059.2	0459	0645	4362R	B	
4361	0500	0538	4326R	B		051401	W086.1	0649	0825	4363A	B	
4362	0627	0643	4362R	B		070117	W112.9	0830	1013	4364A	B	
4362	0649	0726	4363A	B				1019	1202	4365A	B	
4363	0814	0825	4363A	B		084833	W139.7	1206	1345	4366A	B	
4363	0830	0913	4364A	B				1350	1528	4367A	B	
4364	1002	1013	4364A	B		103550	W166.5	1533	1714	4368A	B	
4364	1019	1100	4365A	B				1719	1854	4369A	B	
4365	1149	1201	4365A	B		122306	E166.7	1859	2039	4370A	B	
4365	1206	1248	4366A	B				2046	2231	4371A	B	
4366	1336	1344	4366A	B		141023	E139.9					
4366	1350	1435	4367A	B								
4337	1533	1622	4368A	B		155739	E113.1					
4368	1719	1809	4369A	B		174456	E086.3					
4369	1859	1957	4370A	B		193212	E059.4					
4370	2046	2144	4371A	B		211929	E032.6					
4371	2232	2331	4375R	A		230645	E005.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
2 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4372	2331	0020	4375R	A		000029	E172.4	4375	0415	0559	4375R	B
4373						014745	E145.5	4376	0605	0742	4376A	B
4374						033502	E118.7	4377	0747	0930	4377A	B
4375	0453	0541	7375R	B		052218	E091.9	4378	0934	1115	4378A	B
4376	0640	0729	4376A	B		070935	E065.1	4379	1121	1303	4379A	B
4377	0827	0916	4377A	B		085651	E038.3	4380	1308	1443	4380A	B
4378	1015	1103	4378A	B		104408	E011.4	4381	1448	1627	4381A	B
4379	1202	1251	4379A	B		123124	W015.4	4382	1632	1809	4382A	B
4380	1349	1438	4380A	B		141841	W042.2	4383	1815	1955	4383A	B
4381	1537	1625	4381A	B		160557	W069.0	4384	2000	2143	4384A	B
4382	1724	1809	4382A	B		175314	W095.8					
4383	1911	1955	4383A	B		194030	W122.7					
4384	2058	2142	4384A	B		212747	W149.5					
4385						231503	W176.3					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4372	0020	0030	7375R	A		005402	W021.0	0415	0559	4375R	B	
4373						024118	W047.9	0605	0742	4376A	B	
4374	0415	0453	4375R	B		042835	W074.7	0747	0929	4377A	B	
4375	0541	0559	4375R	B		061551	W101.5	0934	1115	4378A	B	
4375	0605	0640	4376A	B				1121	1303	4379A	B	
4376	0729	0741	4376A	B		080308	W128.3	1307	1442	4380A	B	
4376	0747	0827	4377A	B				1448	1627	4381A	B	
4377	0916	0927	4377A	B		095024	W155.2	1632	1810	4382A	B	
4377	0934	1015	4378A	B				1815	1955	4383A	B	
4378	1103	1115	4378A	B		113741	E178.1	2000	2142	4384A	B	
4378	1121	1202	4379A	B								
4379	1251	1302	4379A	B		132457	E151.2					
4379	1307	1349	4380A	B								
4380	1448	1537	4381A	B		151214	E124.4					
4381	1632	1724	4382A	B		165930	E097.6					
4382	1815	1911	4383A	B		184647	E070.8					
4383	2000	2058	4384A	B		203403	E044.0					
4384						222120	E017.1					
4385						000836	W009.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
3 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4386						010220	E156.9	4387	0134	0323	4390A	A
4387	0220	0309	4390A	A		024936	E130.1	4389	0516	0701	4389R	B
4388						043653	E103.2	4390	0707	0842	4390A	B
4389*	0555	0643	4389R	B		062409	E076.4	4391	0846	1032	4391A	B
4390	0742	0831	4390A	B		081126	E049.6	4392	1037	1218	4392A	B
4391	0929	1018	4391A	B		095842	E022.8	4393	1222	1401	4393A	B
4392	1117	1205	4392A	B		114559	W004.0	4394	1406	1545	4394A	B
4393	1304	1352	4393A	B		133315	W030.9	4395	1549	1727	4395A	B
4394	1451	1540	4394A	B		152032	W057.7	4396	1732	1915	4396A	B
4395	1638	1729	4395A	B		170748	W084.5	4397	1920	2058	4397A	B
4396	1826	1914	4396A	B		185505	W111.3	4398	2103	2248	4398A	B
4397	2013	2058	4397A	B		204221	W138.1					
4398	2200	2247	4398A	B		222938	W165.0					

* NO 6.7 DATA

NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR			
4386	0134	0220	4390A	A		015553	W036.5	0134	0323	4390A	A
4387	0309	0321	4390A	A		034309	W063.3	0516	0701	4389R	B
4388*	0516	0555	4389R	B		053026	W090.1	0707	0842	4390A	B
4389*	0643	0701	4389R	B		071742	W117.0	0847	1031	4391A	B
4389	0707	0742	4390A	B				1037	1212	4392A	B
4390	0831	0841	4390A	B		090459	W143.8	1222	1355	4393A	B
4390	0847	0929	4391A	B				1406	1545	4394A	B
4391*	1018	1031	4391A	B		105215	W170.6	1549	1727	4395A	B
4391	1037	1117	4392A	B				1732	1915	4396A	B
4392	1205	1217	4392A	B		123932	E162.6	1920	2058	4397A	B
4392	1222	1304	4393A	B				2103	2248	4398A	B
4393	1352	1400	4393A	B		142648	E135.8				
4393	1406	1451	4394A	B							
4394	1549	1638	4395A	B		161405	E108.9				
4395	1732	1826	4396A	B		180121	E082.1				
4396	1920	2013	4397A	B		194838	E055.3				
4397	2103	2200	4398A	B		213554	E028.5				
4398	2249	2347	4401R	A		232311	E001.7				

*NO 6.7 DATA

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
4 NOVEMBER 1973

THIR						ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4399	2347	0036	4401R	A		001654	E168.2	4399	2249	0047	4401R	A
4400						020411	E141.4	4401	0235	0430	4401R	B
4401	0322	0410	4401R	B		035127	E114.6	4402	0436	0618	4402R	B
4402	0509	0558	4402R	B		053844	E087.8	4403	0623	0759	4403A	B
4403	0656	0745	4403A	B		072600	E061.0	4404	0804	0946	4404A	B
4404	0844	0932	4404A	B		091317	E034.1	4405	0950	1135	4405A	B
4405	1031	1120	4405A	B		110033	E007.3	4406	1139	1315	4406A	B
4406	1218	1307	4406A	B		124750	W019.5	4407	1320	1458	4407A	B
4407	1406	1454	4407A	B		143506	W046.3	4408	1503	1642	4408A	B
4408	1553	1641	4408A	B		162223	W073.2	4409	1647	1825	4409A	B
4409	1740	1825	4409A	B		180939	W100.0	4410	1831	2012	4410A	B
4410	1927	2011	4410A	B		195656	W126.8	4411	2017	2200	4411A	B
4411	2115	2159	4411A	B		214412	W153.6					
4412						233129	E179.6					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4399	0036	0047	4401R	A		011027	W025.2	2249	0047	4401R	A	
4400	0235	0322	4401R	B		025744	W052.0	0235	0430	4401R	B	
4401	0410	0430	4401R	B		044500	W078.8	0435	0618	4402R	B	
4401	0436	0509	4402R	B				0623	0759	4403A	B	
4402	0558	0617	4402R	B		063217	W105.6	0804	0946	4404A	B	
4402	0623	0656	4403A	B				0950	1135	4405A	B	
4403	0745	0758	4403A	B		081933	W132.4	1139	1315	4406A	B	
4403	0804	0844	4404A	B				1320	1458	4407A	B	
4404	0932	0945	4404A	B		100650	W159.3	1503	1642	4408A	B	
4404	0951	1031	4405A	B				1647	1826	4409A	B	
4405	1120	1134	4405A	B		115406	E173.9	1830	2012	4410A	B	
4405	1139	1218	4406A	B				2017	2200	4411A	B	
4406	1307	1314	4406A	B		134123	E147.1					
4406	1320	1406	4407A	B								
4407	1503	1553	4408A	B		152839	E120.3					
4408	1647	1740	4409A	B		171556	E093.5					
4409	1830	1927	4410A	B		190312	E066.7					
4410	2017	2115	4411A	B		205029	E039.9					
4411						223745	E013.0					
4412	0004	0049	4415R	A		002502	W013.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
5 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4413	0049	0138	4415R	A		011845	E152.8	4413	0004	0159	4415R	A
4414	0236	0325	4414R	B		030602	E126.0	4414	0150	0347	4414R	B
4415	0424	0512	4415R	B		045318	E099.2	4415	0352	0530	4415R	B
4416	0611	0659	4416R	B		064035	E072.3	4416	0536	0719	4416R	B
4417	0758	0847	4417A	B		082751	E045.5	4417	0723	0859	4417A	B
4418	0946	1034	4418A	B		101508	E018.7	4418	0904	1046	4418A	B
4419	1133	1221	4419A	B		120224	W008.1	4419	1051	1232	4419A	B
4420	1320	1409	4420A	B		134941	W034.9	4420	1237	1351	4420A	B
4421	1507	1556	4421A	B		153657	W061.8	4421	1420	1600	4421A	B
4422	1655	1743	4422A	B		172414	W088.6	4422	1604	1744	4422A	B
4423	1842	1927	4423A	B		191130	W115.4	4423	1749	1928	4423A	B
4424	2029	2114	4424A	B		205847	W142.2	4424	1933	2115	4424A	B
4425	2216	2301	4425A	B		224603	W169.1	4425	2120	2302	4425A	B
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4413	0138	0158	4415R	A		021218	W040.6		0003	0158	4415R	A
4413	0150	0236	4414R	B					0150	0347	4414R	B
4414	0325	0346	4414R	B		035935	W067.4		0352	0530	4415R	B
4414	0352	0424	4415R	B					0535	0718	4416R	B
4415	0512	0529	4415R	B		054651	W094.3		0723	0859	4417A	B
4415	0543	0611	4416R	B					0903	1046	4418A	B
4416	0659	0717	4416R	B		073408	W121.1		1051	1232	4419A	B
4416	0723	0758	4417A	B					1237	1415	4420A	B
4417	0847	0858	4417A	B		092124	W147.9		1420	1600	4421A	B
4417	0904	0946	4418A	B					1604	1744	4422A	B
4418	1034	1046	4418A	B		110841	W174.7		1749	1927	4423A	B
4418	1051	1133	4419A	B					1932	2115	4424A	B
4419	1221	1231	4419A	B		125557	E158.5		2120	2302	4425A	B
4419	1237	1320	4420A	B								
4420	1409	1414	2220A	B		144313	E131.7					
4420	1420	1507	4421A	B								
4421	1604	1655	4422A	B		163030	E104.9					
4422	1749	1842	2223A	B		181746	E078.0					
4423	1932	2029	4424A	B		200503	E051.2					
4424	2120	2216	4425A	B		215219	E024.4					
4425*	2305	0004	4428R	A		233936	W002.4					

*NO 6.7 DATA

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
6 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR						INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR						ASC. NODE						
4426*	0004	0052	4428R	A			003320	E164.1	4426	2305	0104	4428R	A
4427							022036	E137.3	4428	0251	0446	4428R	B
4428							040753	E110.5	4429	0451	0634	4429R	B
4429	0525	0614	4429R	B			055509	E083.7	4430	0640	0814	4430A	B
4430	0713	0801	4430A	B			074226	E056.9	4431	0818	0959	4431A	B
4431	0900	0949	4431A	B			092942	E030.0	4432	1004	1149	4432A	B
4432	1047	1136	4432A	B			111659	E003.2	4433	1154	1330	4433A	B
4433	1235	1323	4433A	B			130415	W023.6	4434	1335	1515	4434A	B
4434	1422	1510	4434A	B			145132	W050.4	4435	1519	1659	4435A	B
4435	1609	1658	4435A	B			163848	W077.2	4436	1704	1901	4437A	B
4436	1756	1845	4437A	B			182605	W104.1	4437	1900	2032	4437A	A
4437	1944	2031	4437A	A			201321	W130.9	4438	2033	2215	4438A	B
4438	2131	2215	4438A	B			220038	W157.7					
4439							234754	E175.5					
*NO 6.7 DATA													
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4426*	0052	0102	4428R	A			012652	W029.2	2305	0103	4428R	A	
4427							031409	W056.1	0251	0446	4428R	B	
4428	0451	0525	4429R	B			050125	W082.9	0451	0634	4429R	B	
4429	0614	0633	4429R	B			064842	W109.7	0640	0814	4430A	B	
4429	0640	0713	4430A	B					0819	0959	4431A	B	
4430	0801	0813	4430A	B			083558	W136.5	1004	1149	4432A	B	
4430	0819	0900	4431A	B					1154	1330	4433A	B	
4431	0949	0959	4431A	B			102315	W163.3	1335	1514	4434A	B	
4431	1004	1047	4432A	B					1519	1659	4435A	B	
4432	1136	1149	4432A	B			121031	E169.8	1704	1902	4437A	B	
4432	1154	1235	4433A	B					1901	2032	4437A	A	
4433	1323	1330	4433A	B			135748	E143.0	2032	2215	4438A	B	
4433	1335	1422	4434A	B									
4434	1519	1609	4435A	B			154504	E116.2					
4435	1704	1756	4437A	B			173221	E089.4					
4436	1845	1901	4437A	B			191937	E062.6					
4436	1901	1944	4437A	A									
4437	2032	2131	4438A	B			210654	E035.7					
4438							225410	E008.9					
4439	0020	0105	4442R	A			004127	W017.9					
*NO 6.7 DATA													

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
7 NOVEMBER 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4440	0105	0154	4442R	A		013511	E148.7	4440	0020	0214	4442R	A
4441	0253	0341	4441R	B		032228	E121.8	4441	0216	0401	4441R	B
4442	0440	0528	4442R	B		050944	E095.0	4442	0408	0548	4442R	B
4443	0627	0716	4443A	B		065700	E068.2	4443	0552	0729	4443A	B
4444	0814	0903	4444A	B		084417	E041.4	4444	0734	0915	4444A	B
4445	1002	1050	4445A	B		103133	E014.6	4445	0920	1104	4445A	B
4446	1149	1238	4446A	B		121850	W012.3	4446	1109	1249	4446A	B
4447	1336	1425	4447A	B		140606	W039.1	4447	1254	1431	4447A	B
4448	1524	1612	4448A	B		155323	W065.9	4448	1436	1616	4448A	B
4449	1711	1759	4451A	B		174040	W092.7	4449	1621	1803	4451A	B
4450	1858	1947	4451A	A		192756	W119.5	4450	1801	2000	4451A	A
4451						211512	W146.4	4452	2139	2320	4452A	B
4452	2233	2319	4452A	B		230229	W173.2					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4440	0154	0214	4442R	A		022843	W044.7	0020	0214	4442R	A	
4440	0206	0253	4441R	B				0206	0401	4441R	B	
4441	0341	0401	4441R	B		041600	W071.5	0408	0547	4442R	B	
4441	0408	0440	4442R	B				0552	0729	4443A	B	
4442	0528	0547	4442R	B		060316	W098.4	0734	0915	4444A	B	
4442	0552	0627	4443A	B				0920	1104	4445A	B	
4443	0716	0728	4443A	B		075033	W125.2	1109	1249	4446A	B	
4443	0734	0814	4444A	B				1254	1431	4447A	B	
4444	0903	0914	4444A	B		093749	W152.0	1436	1616	4448A	B	
4444	0920	1002	4445A	B				1622	1803	4451A	B	
4445	1050	1103	4445A	B		112506	W178.8	1801	1959	4451A	A	
4445	1109	1149	4446A	B				2140	2320	4452A	B	
4446	1238	1248	4446A	B		131222	E154.4					
4446	1254	1336	4447A	B								
4447	1425	1430	4447A	B		145939	E127.5					
4447	1436	1524	4448A	B								
4448	1622	1711	4451A	B		164655	E100.7					
4449	1801	1858	4451A	A		183412	E073.9					
4450	1947	1959	4451A	A		202128	E047.1					
4451	2140	2233	4452A	B		220845	E020.3					
4452	2321	0020	4455R	A		235601	W006.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
8 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR						ASC. NODE						
4453	0020	0108	4455R	A			004945	E160.0	4453	2321	0119	4455R	A
4454							023702	E133.2	4455	0308	0502	4455R	B
4455	0354	0443	4455R	B			042418	E106.4	4456	0508	0650	4456R	B
4456	0542	0630	4456R	B			061135	E079.6	4457	0657	0832	4457A	B
4457	0729	0817	4457A	B			075851	E052.8	4458	0835	1019	4458A	B
4458	0916	1005	4458A	B			094608	E025.9	4459	1023	1207	4459A	B
4459	1104	1152	4459A	B			113324	W000.9	4460	1212	1330	4460A	B
4460	1251	1339	4460A	B			132041	W027.7	4461	1351	1534	4461A	B
4461	1438	1527	4461A	B			150757	W054.5	4462	1539	1716	4462A	B
4462	1625	1714	4462A	B			165514	W081.3	4463	1721	1857	4463A	B
4463	1813	1856	4463A	B			184230	W108.2	4464	1903	2047	4464A	B
4464	2000	2046	4464A	B			202947	W135.0	4465	2052	2232	4465A	B
4465	2147	2231	4465A	B			221703	W161.8					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4453	0108	0119	4455R	A			014318	W033.4	2321	0119	4455R	A	
4454	0308	0354	4455R	B			033034	W060.2	0309	0502	4455R	B	
4455	0443	0501	4455R	B			051751	W087.0	0507	0651	4456R	B	
4455	0507	0542	4456R	B					0657	0831	4457A	B	
4456	0630	0650	4456R	B			070507	W113.8	0835	1019	4458A	B	
4456	0657	0729	4457A	B					1023	1207	4459A	B	
4457	0817	0830	4457A	B			085224	W140.7	1212	1347	4460A	B	
4457	0835	0916	4458A	B					1351	1534	4461A	B	
4458	1005	1018	4458A	B			103940	W167.5	1539	1716	4462A	B	
4458	1023	1104	4459A	B					1721	1857	4463A	B	
4459	1152	1206	4459A	B			122657	E165.7	1901	2047	4464A	B	
4459	1212	1251	4460A	B					2053	2231	4465A	B	
4460	1339	1346	4460A	B			141413	E138.9					
4460	1351	1438	4461A	B									
4461	1527	1533	4461A	B			160130	E112.1					
4461	1539	1625	4462A	B									
4462	1721	1813	4463A	B			174846	E085.3					
4463	1902	2000	4464A	B			193603	E058.5					
4464	2053	2147	4465A	B			212319	E031.6					
4465							231036	E004.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
9 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4466						000420	E171.4	4467	0036	0230	4469R	A
4467	0122	0210	4469R	A		015136	E144.6	4468	0223	0417	4468R	B
4468	0309	0357	4468R	B		033853	E117.7	4469	0424	0604	4469R	B
4469	0456	0545	4469R	B		052609	E090.9	4470	0608	0748	4470A	B
4470	0643	0732	4470A	B		071326	E064.1	4471	0752	0932	4471A	B
4471	0831	0919	4471A	B		090042	E037.3	4472	0936	1122	4472A	B
4472	1018	1107	4472A	B		104759	E010.5	4473	1127	1306	4473A	B
4473	1205	1254	4473A	B		123515	W016.4	4474	1310	1448	4474A	B
4474	1353	1441	4474A	B		142232	W043.2	4475	1453	1631	4475A	B
4475	1540	1628	4475A	B		160948	W070.0	4476	1636	1814	4476A	B
4476	1727	1813	4476A	B		175705	W096.8	4477	1819	1958	4477A	B
4477	1914	1957	4477A	B		194421	W123.6	4478	2004	2145	4478A	B
4478	2102	2145	4478A	B		213138	W150.5					
4479						231854	W177.3					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4466	0036	0122	4469R	A		005752	W022.0	0035	0229	4469R	A	
4467	0210	0228	4469R	A		024509	W048.9	0223	0417	4468R	B	
4467	0223	0309	4468R	B				0423	0604	4469R	B	
4468	0357	0416	4468R	B		043225	W075.7	0609	0747	4470A	B	
4468	0423	0456	4469R	B				0752	0932	4471A	B	
4469	0545	0603	4469R	B		061942	W102.5	0937	1122	4472A	B	
4469	0609	0643	4470A	B				1127	1306	4473A	B	
4470	0732	0747	4470A	B		080658	W129.3	1310	1447	4474A	B	
4470	0752	0831	4471A	B				1453	1631	4475A	B	
4471	0919	0931	4471A	B		095415	W156.1	1636	1814	4476A	B	
4471	0937	1018	4472A	B				1819	1957	4477A	B	
4472	1107	1121	4472A	B		114131	E177.1	2002	2146	4478A	B	
4472	1127	1205	4473A	B								
4473	1254	1305	4473A	B		132847	E150.3					
4473	1310	1353	4474A	B								
4474	1441	1447	4474A	B		151604	E123.4					
4474	1452	1540	4475A	B								
4475	1636	1727	4476A	B		170320	E096.6					
4476	1819	1914	4477A	B		185037	E069.8					
4477	2003	2102	4478A	B		203753	E043.0					
4478						222510	E016.2					
4479	2352	0036	4482R	A		001226	W010.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
10 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID						INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4480	0036	0125	4482R	A			010611	E155.9	4480	2351	0147	4482R	A
4481							025327	E129.1	4482	0325	0518	4482R	B
4482	0411	0459	4482R	B			044044	E102.3	4483	0524	0707	4483R	B
4483	0558	0646	4483R	B			062800	E075.4	4484	0712	0848	4484A	B
4484	0745	0834	4484A	B			081517	E048.6	4485	0852	1034	4485A	B
4485	0932	1021	4485A	B			100233	E021.8	4486	1039	1222	4486A	B
4486	1120	1208	4486A	B			114950	W005.0	4487	1227	1405	4487A	B
4487	1307	1356	4487A	B			133706	W031.8	4488	1410	1550	4488A	B
4488	1454	1543	4488A	B			152423	W058.7	4489	1554	1729	4489A	B
4489	1642	1728	4489A	B			171139	W085.5	4490	1734	1914	4490A	B
4490	1829	1913	4490A	B			185856	W112.3	4491	1919	2103	4491A	B
4491	2016	2102	4491A	B			204612	W139.1	4492	2108	2248	4492A	B
4492	2203	2247	4492A	B			223329	W165.9					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4480	0125	0146	4482R	A			015943	W037.5	2351	0146	4482R	A	
4481	0325	0411	4482R	B			034659	W064.3	0325	0518	4482R	B	
4482	0459	0517	4482R	B			053416	W091.1	0523	0707	4483R	B	
4482	0523	0558	4483R	B					0712	0848	4484A	B	
4483	0646	0706	4483R	B			072132	W117.9	0852	1034	4485A	B	
4483	0712	0745	4484A	B					1039	1222	4486A	B	
4484	0834	0847	4484A	B			090849	W144.8	1227	1405	4487A	B	
4484	0852	0932	4485A	B					1410	1550	4488A	B	
4485	1039	1120	4486A	B			105605	W171.6	1555	1729	4489A	B	
4486	1208	1221	4486A	B			124322	E161.6	1733	1914	4490A	B	
4486	1227	1307	4487A	B					1919	2103	4491A	B	
4487	1356	1404	4487A	B			143038	E134.8	2108	2248	4492A	B	
4487	1410	1454	4488A	B									
4488	1555	1642	4489A	B			161755	E108.0					
4489	1734	1829	4490A	B			180511	E081.1					
4490	1919	2016	4491A	B			195228	E054.3					
4491	2108	2203	4492A	B			213944	E027.5					
4492							232701	E000.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
11 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4493						002045	E167.2	4494	0052	0245	4495R	A
4494	0138	0226	4495R	A		020802	E140.4	4495	0239	0433	4495R	B
4495	0325	0414	4495R	B		035518	E113.6	4496	0439	0620	4496R	B
4496	0512	0601	4496R	B		054235	E086.8	4497	0625	0803	4497A	B
4497	0700	0748	4497A	B		072951	E060.0	4498	0807	0950	4498A	B
4498*	0847	0935	4498A	B		091708	E033.2	4499	0955	1138	4499A	B
4499	1034	1123	4499A	B		110424	E006.4	4500	1143	1316	4500A	B
4500	1221	1310	4500A	B		125141	W020.5	4501	1322	1502	4501A	B
4501	1409	1457	4501A	B		143857	W047.3	4502	1507	1648	4502A	B
4502	1556	1645	4502A	B		162614	W074.1	4503	1652	1835	4503A	B
4503	1743	1832	4503A	B		181330	W100.9	4504	1840	2020	4504A	B
4504	1931	2019	4504A	B		200047	W127.7	4505	2025	2202	4505A	B
4505	2118	2202	4505A	B		214803	W154.6	4506	2206	0007	4509R	A
4506	2305	2354	4509R	A		233520	E178.6					
*NO 6.7 DATA												
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4493	0053	0138	4495R	A		011417	W026.1	0053	0244	4495R	A	
4494	0226	0244	4495R	A		030134	W053.0	0239	0433	4495R	B	
4494	0239	0325	4495R	B				0438	0620	4496R	B	
4495	0414	0432	4495R	B		044850	W079.8	0625	0803	4497A	B	
4495	0438	0520	4496R	B				0807	0950	4498A	B	
4496	0601	0619	4496R	B		063607	W106.6	0955	1138	4499A	B	
4496	0625	0700	4497A	B				1143	1316	4500A	B	
4497	0748	0802	4497A	B		082323	W133.4	1322	1502	4501A	B	
4497*	0807	0847	4498A	B				1507	1648	4502A	B	
4498*	0935	0949	4498A	B		101040	W160.2	1653	1835	4503A	B	
4498	0955	1034	4499A	B				1840	2020	4504A	B	
4499	1123	1137	4499A	B		115756	E173.0	2025	2202	4505A	B	
4499	1144	1221	4500A	B				2207	0006	4509R	A	
4500	1322	1409	4501A	B		134513	E146.1					
4501	1457	1502	4501A	B		153229	E119.3					
4501	1508	1556	4502A	B								
4502	1700	1743	4503A	B		171946	E092.5					
4503	1840	1931	4504A	B		190702	E065.7					
4504	2025	2118	4505A	B		205419	E038.9					
4505	2206	2305	4509R	A		224135	E012.0					
4506	2354	0006	4509R	A		002852	W014.8					
*NO 6.7 DATA												

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
12 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4507						012236	E151.8	4508	0154	0351	4508R	B
4508	0240	0328	4508R	B		030953	E125.0	4509	0356	0534	4509R	B
4509	0427	0515	4509R	B		045709	E098.2	4510	0540	0716	4510A	B
4510	0614	0703	4510A	B		064426	E071.4	4511	0721	0903	4511A	B
4511	0801	0850	4511A	B		083142	E044.5	4512	0908	1053	4512A	B
4512	0949	1037	4512A	B		101859	E017.7	4513	1058	1237	4513A	B
4513	1136	1224	4513A	B		120615	W009.1	4514	1242	1419	4514A	B
4514	1323	1412	4514A	B		135332	W035.9	4515	1423	1603	4515A	B
4515	1511	1559	4515A	B		154048	W062.7	4516	1608	1745	4516A	B
4516	1658	1744	4516A	B		172805	W089.6	4517	1750	1929	4517A	B
4517	1845	1929	4517A	B		191521	W116.4	4518	1935	2118	4518A	B
4518	2032	2118	4518A	B		210238	W143.2	4519	2124	2306	4519A	B
4519	2220	2305	4519A	B		224954	W170.0					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4507	0154	0240	4508R	B		021608	W041.6		0154	0351	4508R	B
4508	0328	0350	4508R	B		040325	W068.4		0357	0534	4509R	B
4508	0357	0427	4509R	B					0539	0716	4510A	B
4509	0515	0533	4509R	B		055041	W095.2		0721	0903	4511A	B
4509	0539	0614	4510A	B					0908	1053	4512A	B
4510	0703	0715	4510A	B		073758	W122.1		1058	1237	4513A	B
4510	0721	0801	4511A	B					1242	1419	4514A	B
4511	0850	0902	4511A	B		092514	W148.9		1423	1603	4515A	B
4511	0908	0949	4512A	B					1608	1745	4516A	B
4512	1037	1052	4512A	B		111231	W175.7		1750	1930	4517A	B
4512	1058	1136	4513A	B					1935	2118	4518A	B
4513	1224	1237	4513A	B		125947	E157.5		2124	2306	4519A	B
4513	1243	1323	4514A	B								
4514	1412	1418	4514A	B		144704	E130.7					
4504	1424	1511	4515A	B								
4515	1608	1658	4516A	B		163420	E103.9					
4516	1750	1845	4517A	B		182137	E077.1					
4517	1935	2032	4518A	B		200853	E050.2					
4518	2124	2220	4519A	B		215610	E023.4					
4519						234326	W003.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
13 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4520						003711	E163.2	4521	0109	0300	4524R	A
4521	0154	0243	4524R	A		022427	E136.3	4523	0551	0636	4523R	B
4522						041144	E109.5	4524	0641	0817	4524A	B
4523	0529	0617	4523R	B		055900	E082.7	4525	0821	1005	4525A	B
4524	0716	0804	4524R	B		074617	E055.9	4527	1157	1338	4527A	B
4525	0903	0952	4525A	B		093333	E029.1	4528	1342	1520	4528A	B
4526	1117	1139	4526A	B		112050	E002.2	4529	1525	1702	4529A	B
4527	1238	1326	4527A	B		130806	W024.6	4530	1708	1845	4530A	B
4528	1425	1514	4528A	B		145523	W051.4	4531	1851	2025	4531A	B
4529	1612	1701	4529A	B		164239	W078.2	4532	2038	2220	4532A	B
4530	1800	1844	4530A	B		182956	W105.0					
4531	1947	2032	4531A	B		201712	W131.9					
4532	2134	2219	4532A	B		220429	W158.7					
4533						235145	E174.5					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4520	0110	0154	4524R	A		013043	W030.2	0110	0300	4524R	A	
4521	0243	0259	4524R	A		031759	W057.0	0451	0636	4523R	B	
4522	0451	0529	4523R	B		050516	W083.9	0641	0817	4524A	B	
4523	0617	0635	4523R	B		065232	W110.7	0821	1004	4525A	B	
4523	0641	0716	4524R	B				1157	1338	4527A	B	
4524	0804	0816	4524R	B		083949	W137.5	1342	1520	4528A	B	
4524	0821	0903	4525A	B				1525	1702	4529A	B	
4525	0952	1003	4525A	B		102705	W164.3	1708	1845	4530A	B	
4526	1139	1152	4526A	B		121422	E168.9	1851	2025	4531A	B	
4526	1157	1238	4527A	B				2038	2220	4532A	B	
4527	1326	1337	4527A	B		140138	E142.0					
4527	1342	1425	4528A	B								
4528	1514	1519	4528A	B		154854	E115.2					
4528	1525	1612	4529A	B								
4529	1708	1800	4530A	B		173611	E088.4					
4530	1851	1947	4531A	B		192327	E061.6					
4531	2038	2134	4532A	B		211044	E034.8					
4532						225800	E007.9					
4533	0023	0109	4536R	A		004517	W018.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
14 NOVEMBER 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE					INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4534	0109	0157	4536R	A		013902	E147.7	4536	0408	0550	4536R	B
4535						032618	E120.9	4537	0556	0733	4537R	B
4536	0443	0532	4536R	B		051335	E094.0	4538	0737	0919	4538A	B
4537	0630	0719	4537A	B		070051	E067.2	4539	0924	1105	4539A	B
4538	0818	0906	4538A	B		084808	E040.4	4540	1110	1252	4540A	B
4539	1005	1053	4539A	B		103524	E013.6	4541	1257	1437	4541A	B
4540	1152	1241	4540A	B		122241	W013.2	4542	1441	1621	4542A	B
4541	1340	1428	4541A	B		140957	W040.1	4543	1625	1804	4543A	B
4542	1527	1613	4542A	B	1S	155714	W066.9	4544	1808	1950	4544A	B
4543	1714	1803	4543A	B		174430	W093.7	4545	1955	2133	4545A	B
4544	1901	1949	4544A	B		193147	W120.5					
4545	2049	2132	4545A	B		211903	W147.3					
4546						230620	W174.1					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4534	0157	0217	4536R	A		023233	W045.7		0023	0217	4536R	A
4535	0409	0443	4536R	B		041950	W072.5		0409	0550	4536R	B
4536	0532	0549	4536R	B		060706	W099.3		0555	0733	4537A	B
4536	0555	0630	4537A	B					0737	0919	4538A	B
4537	0719	0732	4537A	B		075423	W126.2		0924	1106	4539A	B
4537	0737	0818	4538A	B					1110	1253	4540A	B
4538	0906	0918	4538A	B		094139	W153.0		1257	1437	4541A	B
4538	0924	1005	4539A	B					1441	1620	4542A	B
4539	1053	1104	4539A	B		112856	W179.8		1625	1804	4543A	B
4539	1110	1152	4540A	B					1809	1950	4544A	B
4540	1241	1252	4540A	B		131612	E153.4		1955	2133	4545A	B
4540	1258	1340	4541A	B								
4541	1428	1435	4541A	B		150329	E126.6					
4541	1441	1527	4542A	B	1N							
4542	1625	1714	4543A	B		165045	E099.7					
4543	1809	1901	4544A	B		183802	E072.9					
4544	1955	2049	4545A	B		202518	E046.1					
4545						221235	E019.3					
4546	2327	0023	4549R	A		235951	W007.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
15 NOVEMBER 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4547	0023	0112	4549R	A			005336	E159.0	4547	2326	0126	4549R	A
4548							024053	E132.2	4549	0312	0456	4549R	B
4549	0358	0446	4549R	B			042809	E105.4	4550	0511	0653	4550R	B
4550	0545	0633	4550R	B			061526	E078.6	4551	0702	0835	4551A	B
4551	0732	0821	4551A	B			080242	E051.7	4552	0839	1023	4552A	B
4552	0919	1008	4552A	B			094959	E024.9	4553	1028	1205	4553A	B
4553	1107	1155	4553A	B			113715	W001.9	4554	1210	1351	4554A	B
4554	1254	1343	4554A	B			132432	W028.7	4555	1356	1536	4555A	B
4555	1441	1530	4555A	B			151148	W055.5	4556	1541	1719	4556A	B
4556	1629	1717	4556A	B			165905	W082.4	4557	1728	1926	4559A	B
4557	1816	1904	4559A	B			184621	W109.2	4559	2039	2232	4559A	A
4558	2035	2052	4559A	A			203338	W136.0					
4559	2150	2234	4559A	A			222054	W162.8					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4547	0112	0124	4549R	A			014708	W034.4	2327	0125	4549R	A	
4548	0313	0358	4549R	B			033424	W061.2	0313	0455	4549R	B	
4549	0446	0457	4549R	B			052141	W088.0	0511	0653	4550R	B	
4549	0511	0545	4550R	B					0702	0835	4551A	B	
4550	0633	0653	4550R	B			070857	W114.8	0839	1023	4552A	B	
4550	0702	0732	4551A	B					1028	1205	4553A	B	
4551	0821	0834	4551A	B			085614	W141.6	1210	1351	4554A	B	
4551	0839	0919	4552A	B					1357	1536	4555A	B	
4552	1008	1022	4552A	B			104330	W168.5	1541	1719	4556A	B	
4552	1028	1107	4553A	B					1727	1926	4559A	B	
4553	1155	1204	4553A	B			123047	E164.7	2035	1926	4559A	A	
4553	1210	1254	4554A	B									
4554	1343	1351	4554A	B			141803	E137.9					
4554	1356	1441	4555A	B									
4555	1530	1536	4555A	B			160520	E111.1					
4555	1541	1629	4556A	B									
4556	1727	1816	4559A	B			175236	E084.3					
4557	1904	1926	4559A	B			193953	E057.5					
4558	2052	2150	4559A	A			212709	E030.6					
4559							231426	E003.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
16 NOVEMBER 1973

THIR								ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE TIME	LONG				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	HRMNSS	DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
DAYTIME THIR						**ASC. NODE**						
4560						000811	E170.4	4561	0039	0234	4565A	A
4561	0125	0213	4565A	A		015527	E143.6	4562	0226	0422	4562R	B
4562	0312	0401	4562R	B		034244	E116.7	4563	0427	0610	4563R	B
4563	0459	0548	4563R	B		053000	E089.9	4564	0615	0749	4564A	B
4564	0647	0735	4564A	B		071717	E063.1	4565	0754	0934	4565A	B
4565	0834	0922	4565A	B		090433	E036.3	4566	0939	1125	4566A	B
4566	1021	1110	4566A	B		105150	E009.5	4567	1131	1311	4567A	B
4567	1208	1257	4567A	B		123906	W017.4	4568	1315	1451	4568A	B
4568	1356	1444	4568A	B		142623	W044.2	4569	1455	1636	4569A	B
4569	1543	1632	4569A	B	1W	161339	W071.0	4570	1640	1823	4570A	B
4570	1730	1819	4570A	B		180056	W097.8	4571	1828	2003	4571A	B
4571	1918	2002	4571A	B		194812	W124.6	4572	2008	2149	4572A	B
4572	2105	2150	4572A	B		213529	W151.5					
4573						232245	W178.3					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4560	0040	0125	4565A	A		010142	W023.0	0040	0234	4565A	A	
4561	0213	0233	4565A	A		024859	W049.8	0226	0422	4562R	B	
4561	0227	0312	4562R	B				0427	0610	4563R	B	
4562	0401	0421	4562R	B		043615	W076.7	0615	0749	4564A	B	
4562	0427	0459	4563R	B				0754	0934	4565A	B	
4563	0548	0610	4563R	B		062332	W103.5	0938	1126	4566A	B	
4563	0615	0647	4564A	B				1131	1311	4567A	B	
4564	0735	0748	4564A	B		081048	W130.3	1316	1451	4568A	B	
4564	0754	0834	4565A	B				1456	1636	4569A	B	
4565	0922	0933	4565A	B		095805	W157.1	1641	1823	4570A	B	
4565	0938	1021	4566A	B				1828	2003	4571A	B	
4566	1110	1125	4566A	B		114521	E176.1	2007	2149	4572A	B	
4566	1131	1208	4567A	B								
4567	1257	1310	4567A	B		133238	E149.3					
4567	1316	1356	4568A	B								
4568	1444	1450	4568A	B		151954	E122.4					
4568	1456	1543	4569A	B	1E							
4569	1641	1730	4570A	B		170711	E095.6					
4570	1828	1918	4571A	B		185427	E068.8					
4571	2007	2105	4572A	B		204144	E042.0					
4572						222900	E015.2					
4573	2355	0039	4576R	A		001617	W011.7					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
17 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4574	0039	0128	4576R	A		011002	E154.9	4574	2355	0151	4576R	A
4575						025718	E128.1	4576	0330	0522	4576R	B
4576	0414	0502	4576R	B		044435	E101.3	4577	0527	0712	4577R	B
4577	0601	0650	4577R	B		063151	E074.5	4578	0717	0850	4578A	B
4578	0748	0837	4578A	B		081908	E047.6	4579	0855	1040	4579A	B
4579	0936	1024	4579A	B		100624	E020.8	4580	1046	1224	4580A	B
4580	1123	1212	4580A	B		115341	W006.0	4581	1228	1408	4581A	B
4581	1310	1359	4581A	B		134057	W032.8	4582	1413	1552	4582A	B
4582	1458	1546	4582A	B		152814	W059.7	4583	1557	1736	4583A	B
4583	1645	1733	4583A	B		171530	W086.5	4584	1740	1922	4584A	B
4584	1832	1921	4584A	B		190247	W113.3	4585	1929	2059	4586A	B
4585	2014	2058	4586A	B		205003	W140.1	4586	2120	2249	4586A	A
4586	2207	2247	4586A	A		223720	W166.9					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4574	0128	0142	4576R	A		020333	W038.5		2355	0151	4576R	A
4575	0329	0414	4576R	B		035049	W065.3		0329	0522	4576R	B
4576	0502	0521	4576R	B		053806	W092.1		0527	0712	4577R	B
4576	0527	0601	4577R	B					0717	0850	4578A	B
4577	0650	0711	4577R	B		072522	W118.9		0855	1040	4579A	B
4577*	0717	0748	4578A	B					1046	1223	4580A	B
4578	0837	0850	4578A	B		091239	W145.8		1228	1409	4581A	B
4578	0855	0936	4579A	B					1414	1552	4582A	B
4579	1024	1040	4579A	B		105955	W172.6		1557	1735	4583A	B
4579	1046	1123	4580A	B					1710	1922	4584A	B
4580	1212	1222	4580A	B		124712	E160.6		1929	2059	4586A	B
4580	1228	1310	4581A	B					2121	2249	4586A	A
4581	1359	1408	4581A	B		143428	E133.8					
4581	1414	1458	4582A	B								
4582	1546	1551	4582A	B		162145	E107.0					
4582	1557	1645	4583A	B								
4583	1740	1832	4584A	B		180901	E080.2					
4584	1933	2019	4586A	B		195618	E053.3					
4585	2121	2207	4586A	A		214334	E026.5					
4586						233051	W000.3					

*DIFFERENT TIME FOR 6.7 DATA

4577	0741	0748	4578A	B

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
18 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
	11.5 + 6.7		INT ORBIT +	H D R S	THIR GRID CORR		TIME	LONG				INT ORBIT +	H D R S
DATA ORBIT	ON HRMN	OFF HRMN	STDN		LALO		HRMNSS	DEG	DATA ORBIT	ON HRMN	OFF HRMN	STDN	
	DAYTIME THIR						ASC. NODE						
4587							002436	E166.3	4588	0056	0248	4589R	A
4588	0141	0230	4589R	A			021153	E139.4	4589	0242	0437	4589R	B
4589	0328	0417	4589R	B			035909	E112.6	4590	0443	0624	4590R	B
4590	0516	0604	4590A	B			054626	E085.8	4591	0630	0805	4591A	B
4591	0703	0751	4591A	B			073342	E059.0	4592	0812	0953	4592A	B
4592	0850	0939	4592A	B			092059	E032.2	4593	0958	1142	4593A	B
4593	1037	1126	4593A	B			110815	E005.4	4594	1147	1324	4594A	B
4594	1225	1313	4594A	B			125532	W021.5	4595	1328	1508	4595A	B
4595	1412	1501	4595A	B			144248	W048.3	4596	1513	1651	4596A	B
4596	1559	1648	4596A	B			163005	W075.1	4597	1655	1834	4597A	B
4597	1747	1833	4597A	B			181721	W101.9	4598	1838	2020	4598A	B
4598	1934	2019	4598A	B			200438	W128.8	4599	2025	2207	4599A	B
4599	2121	2206	4599A	B			215154	W155.6	4600	2211	0010	4603R	A
4600	2308	2357	4603R	A			233911	E177.6					
	NIGHTTIME THIR						DESC. NODE			NEMS - SCR - ITPR			
4587	0056	0141	4589R	A			011807	W027.1		0056	0248	4589R	A
4588	0230	0248	4589R	A			030524	W053.9		0242	0437	4589R	B
4588	0242	0328	4589R	B						0442	0624	4590R	B
4589	0417	0435	4589R	B			045240	W080.8		0629	0805	4591A	B
4589	0442	0516	4590A	B						0812	0953	4592A	B
4590	0604	0624	4590A	B			063957	W107.6		0958	1143	4593A	B
4590	0630	0703	4591A	B						1148	1323	4594A	B
4591	0751	0804	4591A	B			082713	W134.3		1328	1508	4595A	B
4591	0812	0850	4592A	B						1514	1651	4596A	B
4592	0939	0952	4592A	B			101430	W161.2		1655	1834	4597A	B
4592	0958	1037	4593A	B						1838	2020	4598A	B
4593	1126	1142	4593A	B			120146	E172.0		2025	2207	4599A	B
4593	1148	1225	4594A	B						2211	0010	4603R	A
4594	1313	1323	4594A	B			134903	E145.2					
4594	1328	1412	4595A	B									
4595	1501	1507	4595A	B			153619	E118.3					
4595	1514	1559	4596A	B									
4596	1656	1747	4597A	B			172336	E091.5					
4597	1839	1934	4598A	B			191052	E064.7					
4598	2025	2121	4599A	B			205809	E037.9					
4599	2212	2308	4603R	A			224525	E011.1					
4600	2357	0010	4603R	A			003242	W015.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
19 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR							**ASC. NODE**						
4601							012627	E150.8	4602	0157	0356	4602R	B
4602	0243	0331	4602R	B			031344	E124.0	4603	0401	0538	4603R	B
4603	0430	0519	4603R	B			050100	E097.2	4604	0544	0720	4604A	B
4604	0617	0706	4604A	B			064817	E070.3	4605	0724	0906	4605A	B
4605	0805	0853	4605A	B			083533	E043.5	4606	0911	1056	4606A	B
4606	0952	1041	4606A	B			102250	E016.7	4607	1102	1239	4607A	B
4607	1139	1228	4607A	B			121006	W010.1	4608	1243	1423	4608A	B
4608	1327	1415	4608A	B			135723	W036.9	4609	1428	1609	4609A	B
4609	1514	1602	4609A	B			154439	W063.8	4610	1614	1752	4610A	B
4610	1701	1750	4610A	B		1W	173156	W090.6	4611	1757	1937	4611A	B
4611	1848	1936	4611A	B			191912	W117.4	4612	1942	2119	4612A	B
4612	2036	2112	4612A	B			210629	W144.2	4613	2126	2308	4613A	B
4613	2223	2309	4613A	B			225345	W171.0					
NIGHTTIME THIR							**DESC. NODE**		**NEMS - SCR - ITPR**				
4601	0158	0243	4602R	B			021958	W042.6	0157	0356	4602R	B	
4602	0331	0355	4602R	B			040715	W069.4	0402	0538	4603R	B	
4602	0402	0430	4603R	B					0543	0720	4604A	B	
4603	0519	0537	4603R	B			055431	W096.2	0724	0906	4605A	B	
4603	0543	0617	4604A	B					0911	1057	4606A	B	
4604	0706	0719	4604A	B			074148	W123.0	1102	1239	4607A	B	
4604	0724	0805	4605A	B					1243	1423	4608A	B	
4605	0853	0905	4605A	B			092904	W149.9	1427	1609	4609A	B	
4605	0911	0952	4606A	B					1614	1752	4610A	B	
4606	1041	1056	4606A	B			111621	W176.7	1757	1937	4611A	B	
4606	1102	1139	4607A	B					1942	2119	4612A	B	
4607	1228	1238	4607A	B			130337	E156.5	2126	2308	4613A	B	
4607	1243	1327	4608A	B									
4608	1415	1422	4608A	B			145054	E129.7					
4608	1427	1514	4609A	B									
4609	1602	1609	4609A	B			163810	E102.9					
4609	1614	1701	4610A	B		1E							
4610	1757	1848	4611A	B			182527	E076.1					
4611	1942	2036	4612A	B			201243	E049.2					
4612	2126	2223	4613A	B			220000	E022.4					
4613							234716	W004.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
20 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4614						004102	E162.2	4615	0112	0304	4616R	A
4615	0157	0246	4616R	A		022818	E135.3	4616	0259	0453	4616R	B
4616	0345	0433	4616R	B		041535	E108.5	4617	0459	0643	4617R	B
4617	0532	0620	4617R	B		060251	E081.7	4618	0648	0822	4618A	B
4618	0719	0808	4618A	B		075008	E054.9	4619	0827	1012	4619A	B
4619	0907	0955	4619A	B		093724	E028.1	4620	1016	1158	4620A	B
4620	1054	1142	4620A	B		112441	E001.2	4621	1203	1339	4621A	B
4621	1241	1330	4621A	B		131157	W025.6	4622	1343	1521	4622A	B
4622	1428	1517	4622A	B		145914	W052.4	4623	1526	1703	4623A	B
4623	1616	1703	4623A	B		164630	W079.2	4624	1710	1848	4624A	B
4624	1803	1848	4624A	B		183347	W106.0	4625	1855	2038	4625A	B
4625	1950	2037	4625A	B		202103	W132.9	4626	2042	2223	4626A	B
4626	2137	2222	4626A	B		220820	W159.7	4627	2228	0027	4630R	A
4627	2325	0013	4630R	A		235536	E173.5					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4614	0113	0157	4616R	A		013433	W031.2		0113	0303	4616R	A
4615	0246	0303	4616R	A		032149	W058.1		0259	0453	4616R	B
4615	0259	0345	4616R	B					0458	0643	4617R	B
4616	0433	0453	4616R	B		050906	W084.9		0649	0822	4618A	B
4616	0459	0532	4617R	B					0827	1011	4619A	B
4617	0620	0643	4617R	B		065622	W111.7		1016	1158	4620A	B
4617	0648	0719	4618A	B					1203	1338	4621A	B
4618	0808	0822	4618A	B		084339	W138.5		1343	1521	4622A	B
4618	0827	0907	4619A	B					1526	1703	4623A	B
4619	0955	1011	4619A	B		103055	W165.3		1710	1849	4624A	B
4619	1016	1054	4620A	B					1853	2038	4625A	B
4620	1142	1157	4620A	B		121812	E167.9		2043	2223	4626A	B
4620	1203	1241	4621A	B					2228	0026	4630R	A
4621	1330	1338	4621A	B		140528	E141.0					
4621	1343	1428	4622A	B								
4622	1526	1616	4623A	B		155244	E114.2					
4623	1710	1803	4624A	B		174001	E087.4					
4624	1853	1950	4625A	B		192717	E060.6					
4625	2043	2137	4626A	B		211434	E033.8					
4626	2228	2325	4630R	A		230150	E007.0					
4627	0013	0026	4630R	A		004907	W019.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
21 NOVEMBER 1973

THIR							ASC. AND		ESMR				
	11.5 + 6.7		INT ORBIT	H D	THIR GRID		DESC. NODE					INT ORBIT	H D
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S	CORR LALO		TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	R S
	DAYTIME THIR						ASC. NODE						
4628							014253	E146.7	4629	0213	0410	4629R	B
4629	0259	0348	4629R	B			033009	E119.9	4630	0417	0556	4630R	B
4630	0447	0535	4630R	B			051726	E093.1	4631	0601	0736	4631A	B
4631	0634	0722	4631A	B			070442	E066.2	4632	0741	0924	4632A	B
4632	0821	0910	4632A	B			085159	E039.4	4633	0929	1112	4633A	B
4633	1008	1057	4633A	B			103915	E012.6	4634	1117	1256	4634A	B
4634	1156	1243	4634A	B			122632	W014.2	4635	1301	1439	4635A	B
4635	1343	1431	4635A	B			141348	W041.0	4636	1444	1624	4636A	B
4636	1530	1619	4636A	B			160104	W067.9	4637	1628	1809	4637A	B
4637	1717	1806	4637A	B			174821	W094.7	4638	1813	1953	4638A	B
4638	1905	1952	4638A	B			193537	W121.5	4639	1957	2138	4639A	B
4639	2052	2138	4639A	B			212254	W148.3					
4640							231010	W175.1					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4628	0213	0259	4629R	B			023623	W046.7	0213	0410	4629R	B	
4629	0348	0410	4629R	B			042340	W073.5	0417	0556	4630R	B	
4629	0417	0447	4630R	B					0601	0736	4631A	B	
4630	0535	0556	4630R	B			061056	W100.3	0741	0924	4632A	B	
4630	0601	0634	4631A	B					0929	1112	4633A	B	
4631	0722	0735	4631A	B			075813	W127.2	1117	1256	4634A	B	
4631	0741	0821	4632A	B					1301	1439	4635A	B	
4632	0910	0923	4632A	B			094529	W154.0	1444	1626	4636A	B	
4632	0929	1008	4633A	B					1628	1809	4637A	B	
4633	1057	1111	4633A	B			113246	E179.2	1813	1953	4638A	B	
4633	1105	1156	4634A	B					1958	2138	4639A	B	
4634	1244	1255	4634A	B			132002	E152.4					
4634	1301	1343	4635A	B									
4635	1431	1438	4635A	B			150719	E125.6					
4635	1444	1530	4636A	B									
4636	1628	1717	4637A	B			165435	E098.8					
4637	1813	1905	4638A	B			184152	E071.9					
4638	1958	2052	4639A	B			202908	E045.1					
4639							221625	E018.3					
4640							000341	W008.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
22 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR							INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG		DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
DAYTIME THIR						**ASC. NODE**							
4641						005727	E158.0		4642	0129	0318	4643R	A
4642	0214	0302	4643R	A		024443	E131.2		4643	0317	0511	4643R	B
4643	0401	0450	4643R	B		043200	E104.4		4644	0517	0659	4644R	B
4644	0548	0637	4644R	B		061916	E077.6		4645	0704	0839	4645A	B
4645	0736	0824	4645A	B		080633	E050.8		4646	0844	1025	4646A	B
4646	0923	1011	4646A	B		095349	E024.0		4647	1030	1215	4647A	B
4647	1110	1159	4647A	B		114106	W002.9		4648	1219	1355	4648A	B
4648	1257	1346	4648A	B		132822	W029.7		4649	1359	1539	4649A	B
4649	1445	1533	4649A	B		151539	W056.5		4650	1544	1723	4650A	B
4650	1632	1720	4650A	B		170255	W083.3		4651	1728	1905	4651A	B
4651	1819	1904	4651A	B		185012	W110.1		4652	1911	2053	4652A	B
4652	2006	2052	4652A	B		203728	W137.0		4653	2058	2243	4653A	B
4653	2154	2242	4653A	B		222445	W163.8						
NIGHTTIME THIR						**DESC. NODE**			**NEMS - SCR - ITPR**				
4641	0129	0214	4643R	A		015058	W035.3		0129	0318	4643R	A	
4642	0302	0318	4643R	A		033814	W062.2		0317	0511	4643R	B	
4642	0317	0401	4643R	B					0517	0659	4644R	B	
4643	0450	0510	4643R	B		052531	W089.0		0704	0839	4645A	B	
4643	0517	0548	4644R	B					0844	1025	4646A	B	
4644	0637	0658	4644R	B		071247	W115.8		1030	1215	4647A	B	
4644	0704	0736	4645A	B					1219	1355	4648A	B	
4645	0824	0833	4645A	B		090004	W142.6		1359	1539	4649A	B	
4645	0844	0923	4646A	B					1544	1723	4650A	B	
4646	1011	1024	4646A	B		104720	W169.4		1727	1905	4651A	B	
4646	1030	1110	4647A	B					1910	2053	4652A	B	
4647	1159	1214	4647A	B		123437	E163.8		2058	2244	4653A	B	
4647	1219	1257	4648A	B									
4648	1346	1354	4648A	B		142153	E136.9						
4648	1404	1445	4649A	B									
4649	1533	1538	4649A	B		160910	E110.1						
4649	1544	1632	4650A	B									
4650	1728	1819	4651A	B		175626	E083.3						
4651	1910	2006	4652A	B		194343	E056.5						
4652	2058	2154	4653A	B		213059	E029.7						
4653	2250	2341	4657R	A		231816	E002.8						

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
23 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
DAYTIME THIR						**ASC. NODE**						
4654	2341	0030	4657R	A		001201	E169.4	4654	2250	0042	4657R	A
4655						015918	E142.6	4656	0230	0425	4656R	B
4656	0316	0404	4656R	B		034634	E115.8	4657	0431	0611	4657R	B
4657	0503	0551	4657R	B		053351	E088.9	4658	0616	0753	4658A	B
4658	0650	0739	4658A	B		072107	E062.1	4659	0758	0942	4659A	B
4659	0837	0926	4659A	B		090824	E035.3	4660	0955	1130	4660A	B
4660	1025	1113	4660A	B		105540	E008.5	4661	1134	1312	4661A	B
4661	1212	1300	4661A	B		124257	W018.3	4662	1317	1456	4662A	B
4662	1359	1448	4662A	B		143013	W045.2	4663	1500	1640	4663A	B
4663	1546	1635	4663A	B		161730	W072.0	4664	1646	1823	4664A	B
4664	1734	1822	4664A	B		180446	W098.8	4665	1828	2008	4665A	B
4665	1921	2006	4665A	B		195203	W125.6	4666	2013	2155	4666A	B
4666	2108	2154	4666A	B		213919	W152.4					
4667						232636	W179.3					
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4654	0030	0042	4657R	A		010532	W024.0	2250	0042	4657R	A	
4655	0231	0316	4656R	B		025249	W050.8	0230	0425	4656R	B	
4656	0404	0424	4656R	B		044005	W077.6	0431	0611	4657R	B	
4656	0431	0503	4657R	B				0616	0754	4658A	B	
4657	0551	0611	4657R	B		062722	W104.4	0758	0942	4659A	B	
4657	0616	0650	4658A	B				0955	1130	4660A	B	
4658	0739	0753	4658A	B		081438	W131.3	1134	1312	4661A	B	
4658	0758	0837	4659A	B				1317	1456	4662A	B	
4659	0926	0942	4659A	B		100155	W158.1	1500	1640	4663A	B	
4659	0955	1025	4660A	B				1646	1823	4664A	B	
4660	1113	1128	4660A	B		114911	E175.1	1827	2008	4665A	B	
4660	1134	1212	4661A	B				2013	2155	4666A	B	
4661	1300	1311	4661A	B		133628	E148.3					
4661	1317	1359	4662A	B								
4662	1448	1454	4662A	B		152344	E121.5					
4662	1501	1546	4663A	B								
4663	1646	1734	4664A	B		171101	E094.7					
4664	1828	1921	4665A	B		185817	E067.8					
4665	2013	2108	4666A	B		204534	E041.0					
4666						223250	E014.2					
4667	2359	0043	4670R	A		002007	W012.6					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
24 NOVEMBER 1973

THIR								ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4668	0043	0131	4670R	A		011352	E153.9	4668	2359	0154	4670R	A
4669	0230	0319	4669R	B		030109	E127.1	4669	0144	0342	4669R	B
4670	0417	0506	4670R	B		044825	E100.3	4670	0347	0525	4670R	B
4671	0605	0653	4671R	B		063542	E073.5	4671	0531	0714	4671R	B
4672*	0752	0835	4672A	B		082258	E046.7	4672	0720	0853	4672A	B
4673	0939	1028	4673A	B		101015	E019.8	4673	0858	1044	4673A	B
4674	1126	1215	4674A	B		115731	W007.0	4674	1049	1228	4674A	B
4675	1314	1402	4675A	B		134448	W033.8	4675	1233	1412	4675A	B
4676	1501	1549	4676A	B		153204	W060.6	4676	1417	1557	4676A	B
4677	1648	1737	4677A	B		171921	W087.4	4677	1601	1739	4677A	B
4678	1836	1923	4678A	B		190637	W114.3	4678	1744	1923	4678A	B
4679	2023	2108	4679A	B		205354	W141.1	4679	1928	2109	4679A	B
4680	2210	2259	4680A	B		224110	W167.9	4680	2114	2300	4680A	B
*ADDITIONAL 6.7 DATA BLOCK												
4672	0840	0853	4672A	B								
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4668	0131	0155	4670R	A		020723	W039.4	2359	0156	4670R	A	
4668	0144	0230	4669R	B				0145	0342	4669R	B	
4669	0319	0341	4669R	B		035439	W066.3	0347	0525	4670R	B	
4669	0347	0417	4670R	B				0530	0714	4671R	B	
4670	0506	0525	4670R	B		054156	W093.1	0720	0854	4672A	B	
4670	0531	0605	4671R	B				0858	1045	4673A	B	
4671	0653	0714	4671R	B		072912	W119.9	1049	1228	4674A	B	
4671	0720	0752	4672A	B				1233	1412	4675A	B	
4672	0858	0939	4673A	B		091629	W146.7	1417	1557	4676A	B	
4673	1028	1044	4673A	B		110345	W173.5	1602	1739	4677A	B	
4673	1050	1126	4674A	B				1744	1923	4678A	B	
4674	1215	1227	4674A	B		125102	E159.6	1928	2109	4679A	B	
4674	1233	1314	4675A	B				2114	2300	4680A	B	
4675	1402	1411	4675A	B		143818	E132.8					
4675	1417	1501	4676A	B								
4676	1549	1556	4676A	B		162535	E106.0					
4676	1602	1648	4677A	B								
4677	1744	1836	4678A	B		181251	E079.2					
4678	1928	2023	4679A	B		200008	E052.4					
4679	2114	2210	4680A	B		214724	E025.6					
4680	2301	2357	4683R	A		233441	W001.3					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
25 NOVEMBER 1973

THIR

DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG
			DAYTIME THIR			ASC. NODE	
4681	2357	0046	4683R	A		002827	E165.3
4682						021543	E138.5
4683	0332	0420	4683R	B		040300	E111.7
4684	0519	0608	4684R	B		055016	E084.8
4685*	0706	0755	4685A	B		073733	E058.0
4686	0854	0942	4686A	B		092449	E031.2
4687	1041	1129	4687A	B		111206	E004.4
4688	1228	1317	4688A	B		125922	W022.4
4689	1415	1504	4689A	B		144639	W049.3
4690	1603	1651	4690A	B		163355	W076.1
4691	1750	1837	4691A	B		182112	W102.9
4692	1937	2024	4692A	B		200828	W129.7
4693	2125	2210	4693A	B		215545	W156.5
4694						234301	E176.7
*DIFFERENT 6.7 TIME							
4685	0712	0755	4685A	B			
			NIGHTTIME THIR			DESC. NODE	
4681	0046	0059	4683R	A		012157	W028.1
4682	0247	0332	4683R	B		030914	W054.9
4683	0420	0440	4683R	B		045630	W081.7
4683	0446	0519	4684R	B			
4684	0608	0629	4684R	B		064347	W108.5
4684*	0635	0706	4685A	B			
4685	0755	0810	4685A	B		083103	W135.4
4685	0816	0854	4686A	B			
4686	0942	0957	4686A	B		101820	W162.2
4686	1003	1041	4687A	B			
4687	1129	1142	4687A	B		120536	E171.0
4687	1148	1228	4688A	B			
4688	1317	1327	4688A	B		135253	E144.2
4688	1333	1415	4689A	B			
4689	1504	1510	4689A	B		154009	E117.4
4689	1516	1603	4690A	B			
4690	1651	1656	4690A	B		172726	E090.5
4690	1702	1750	4691A	B			
4691	1842	1937	4692A	B		191442	E063.7
4692	2030	2125	4693A	B		210159	E036.9
4693						224915	E010.1
4694	0015	0059	4697R	A		003632	W016.7
*NO 11.5 DATA							

ESMR

DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
4681	2301	0100	4683R	A
4683	0247	0441	4683R	B
4684	0446	0630	4684R	B
4685	0635	0811	4685A	B
4686	0816	0958	4686A	B
4687	1003	1144	4687A	B
4688	1148	1329	4688A	B
4689	1333	1511	4689A	B
4690	1515	1657	4690A	B
4691	1702	1837	4691A	B
4692	1842	2025	4692A	B
4693	2030	2212	4693A	B

NEMS - SCR - ITPR

2301	0059	4683R	A
0246	0441	4683R	B
0446	0630	4684R	B
0635	0811	4685A	B
0815	0958	4686A	B
1003	1143	4687A	B
1148	1328	4688A	B
1333	1511	4689A	B
1515	1657	4690A	B
1702	1837	4691A	B
1842	2025	4692A	B
2030	2211	4693A	B

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
26 NOVEMBER 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
DAYTIME THIR						**ASC. NODE**						
4695	0059	0148	4697R	A		013018	E149.8	4695	0015	0210	4697R	A
4696	0246	0335	4696R	B		031734	E123.0	4696	0202	0356	4696R	B
4697	0434	0522	4697R	B		050451	E096.2	4697	0404	0543	4697R	B
4698	0621	0709	4698A	B		065207	E069.4	4698	0548	0724	4698A	B
4699	0808	0857	4699A	B		083924	E042.6	4699	0730	0908	4699A	B
4700	0955	1044	4700A	B		102640	E015.7	4700	0914	1100	4700A	B
4701	1143	1231	4701A	B		121357	W011.1	4701	1104	1242	4701A	B
4702	1330	1419	4702A	B		140113	W037.9	4702	1246	1425	4702A	B
4703	1517	1606	4703A	B		154830	W064.7	4703	1430	1609	4703A	B
4704	1705	1752	4704A	B		173546	W091.5	4704	1614	1752	4704A	B
4705	1852	1936	4705A	B		192303	W118.4	4705	1758	1937	4705A	B
4706	2039	2125	4706A	B		211019	W145.2	4706	1943	2126	4706A	B
4707	2226	2313	4707A	B		225736	W172.0	4707	2130	2314	4707A	B
NIGHTTIME THIR						**DESC. NODE**		**NEMS - SCR - ITPR**				
4695	0148	0209	4697R	A		022348	W043.6	0015	0209	4697R	A	
4695	0202	0246	4696R	B				0201	0358	4696R	B	
4696	0335	0358	4696R	B		041105	W070.4	0404	0543	4697R	B	
4696	0404	0434	4697R	B				0548	0723	4698A	B	
4697	0522	0542	4697R	B		055821	W097.2	0730	0908	4699A	B	
4697	0548	0621	4698A	B				0913	1059	4700A	B	
4698	0709	0723	4698A	B		074538	W124.0	1104	1241	4701A	B	
4698	0730	0808	4699A	B				1246	1425	4702A	B	
4699	0857	0908	4699A	B		093254	W150.8	1429	1609	4703A	B	
4699	0913	0955	4700A	B				1614	1753	4704A	B	
4700	1044	1059	4700A	B		112011	W177.7	1757	1937	4705A	B	
4700	1104	1143	4701A	B				1942	2126	4706A	B	
4701	1231	1241	4701A	B		130727	E155.5	2130	2314	4707A	B	
4701	1246	1330	4702A	B								
4702	1430	1517	4703A	B		145444	E128.7					
4703	1614	1705	4704A	B		164200	E101.9					
4704	1757	1852	4705A	B		182917	E075.1					
4705	1942	2039	4706A	B		201633	E048.3					
4706	2131	2226	4707A	B		220350	E021.4					
4707	2317	0014	4710R	A		235106	W005.4					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
27 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4708	0014	0102	4710R	A		004452	E161.2	4708	2317	0119	4710R	A
4709						023209	E134.4	4710	0304	0458	4710R	B
4710	0348	0437	4710R	B		041925	E107.5	4711	0503	0648	4711R	B
4711	0535	0624	4711R	B		060641	E080.7	4712	0653	0826	4712A	B
4712	0723	0811	4712A	B		075358	E053.9	4713	0830	1012	4713A	B
4713	0910	0958	4713A	B		094114	E027.1	4714	1016	1158	4714A	B
4714	1057	1146	4714A	B		112831	E000.3	4715	1202	1343	4715A	B
4715	1244	1333	4715A	B		131547	W026.6	4716	1347	1530	4716A	B
4716	1432	1520	4716A	B		150304	W053.4	4717	1535	1711	4717A	B
4717	1619	1708	4717A	B		165020	W080.2	4718	1715	1855	4718A	B
4718	1806	1853	4718A	B		183737	W107.0	4719	1859	2041	4719A	B
4719	1954	2040	4719A	B		202453	W133.8	4720	2045	2227	4720A	B
4720	2141	2226	4720A	B		221210	W160.6					
4721						235926	E172.5					
	NIGHTTIME THIR					DESC. NODE			NEMS - SCR - ITPR			
4708	0102	0115	4710R	A		013823	W032.2	2317	0114	4710R	A	
4709	0304	0348	4710R	B		032539	W059.0	0303	0457	4710R	B	
4710	0437	0457	4710R	B		051256	W085.8	0503	0647	4711R	B	
4710	0503	0535	4711R	B				0653	0826	4712A	B	
4711	0624	0647	4711R	B		070012	W112.7	0830	1012	4713A	B	
4711	0653	0723	4712A	B				1017	1157	4714A	B	
4712	0811	0825	4712A	B		084729	W139.5	1202	1343	4715A	B	
4712	0830	0910	4713A	B				1347	1529	4716A	B	
4713	0958	1011	4713A	B		103445	W166.3	1535	1711	4717A	B	
4713	1017	1057	4714A	B				1715	1854	4718A	B	
4714	1146	1156	4714A	B		122202	E166.9	1859	2045	4719A	B	
4714	1202	1244	4715A	B				2045	2227	4720A	B	
4715	1333	1342	4715A	B		140918	E140.1					
4715	1347	1432	4716A	B								
4716	1520	1528	4716A	B		155634	E113.3					
4716	1535	1619	4717A	B								
4717	1715	1806	4718A	B		174351	E086.4					
4718	1859	1954	4719A	B		193107	E059.6					
4719	2045	2141	4720A	B		211824	E032.8					
4720						230540	E006.0					
4721	0031	0115	4724R	A		005257	W020.8					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
28 NOVEMBER 1973

THIR							ASC. AND DESC. NODE		ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR		TIME	LONG				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO		HRMNSS	DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR						ASC. NODE						
4722	0115	0204	4724R	A			014643	E145.7	4722	0031	0221	4724R	A
4723	0303	0317	4723R	B			033359	E118.9	4723	0218	0324	4723R	B
4724	0450	0538	4724R	B			052116	E092.1	4724	0421	0559	4724R	B
4725	0637	0726	4725A	B			070832	E065.3	4725	0604	0740	4725A	B
4726	0824	0913	4726A	B			085549	E038.4	4726	0744	0928	4726A	B
4727	1012	1100	4727A	B			104305	E011.6	4727	0932	1116	4727A	B
4728	1159	1247	4728A	B			123022	W015.2	4728	1120	1259	4728A	B
4729	1346	1435	4729A	B			141738	W042.0	4729	1304	1442	4729A	B
4730	1534	1622	4730A	B			160455	W068.8	4730	1448	1626	4730A	B
4731	1721	1806	4731A	B			175211	W095.7	4731	1630	1809	4731A	B
4732	1908	1953	4732A	B			193928	W122.5	4732	1814	1954	4732A	B
4733	2055	2141	4733A	B			212644	W149.3	4733	1959	2142	4733A	B
4734							231401	W176.1					
	NIGHTTIME THIR						DESC. NODE		NEMS - SCR - ITPR				
4722	0204	0225	4724R	A			024013	W047.7	0031	0221	4724R	A	
4722	0218	0303	4723R	B					0218	0325	4723R	B	
4723	0422	0450	4724R	B			042730	W074.5	0421	0559	4724R	B	
4724	0538	0558	4724R	B			061446	W101.3	0604	0740	4725A	B	
4724	0604	0637	4725A	B					0744	0928	4726A	B	
4725	0726	0739	4725A	B			080203	W128.1	0932	1115	4727A	B	
4725	0744	0824	4726A	B					1120	1259	4728A	B	
4726	0913	0927	4726A	B			094919	W154.9	1304	1442	4729A	B	
4726	0932	1012	4727A	B					1447	1625	4730A	B	
4727	1100	1114	4727A	B			113636	E178.3	1630	1809	4731A	B	
4727	1120	1159	4728A	B					1814	1954	4732A	B	
4728	1247	1258	4728A	B			132352	E151.4	1959	2142	4733A	B	
4728	1304	1346	4729A	B									
4729	1435	1441	4729A	B			151109	E124.6					
4729	1447	1534	4730A	B									
4730	1630	1721	4731A	B			165825	E097.8					
4731	1814	1908	4732A	B			184542	E071.0					
4732	1959	2055	4733A	B			203258	E044.2					
4733							222015	E017.3					
4734	2347	0030	4737R	A			000731	W009.5					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
29 NOVEMBER 1973

THIR							ESMR				
	11.5 + 6.7		INT ORBIT	H D R	THIR GRID CORR	ASC. AND DESC. NODE				INT ORBIT	H D R
DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S	LALO	TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	+ STDN	S
	DAYTIME THIR					ASC. NODE						
4735	0030	0118	4737R	A		010117	E157.1	4735	2347	0142	4737R	A
4736						024834	E130.3	4737	0221	0515	4737R	B
4737	0404	0453	4737R	B		043550	E103.4	4738	0520	0701	4738R	B
4738	0552	0640	4738R	B		062307	E076.6	4739	0706	0845	4739A	B
4739	0739	0827	4739A	B		081023	E049.8	4740	0849	1029	4740A	B
4740	0926	1015	4740A	B		095740	E023.0	4741	1034	1217	4741A	B
4741	1113	1202	4741A	B		114456	W003.8	4742	1221	1401	4742A	B
4742	1301	1349	4742A	B		133213	W030.7	4743	1405	1543	4743A	B
4743	1448	1537	4743A	B		151929	W057.5	4744	1548	1724	4744A	B
4744	1635	1722	4744A	B		170646	W084.3	4745	1731	1911	4745A	B
4745	1823	1910	4745A	B		185402	W111.1	4746	1917	2059	4746A	B
4746	2010	2058	4746A	B		204119	W137.9	4747	2105	2246	4747A	B
4747	2157	2245	4747A	B		222835	W164.8					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4735	0118	0135	4737R	A		015448	W036.3	2347	0142	4737R	A	
4736	0324	0404	4737R	B		034204	W063.1	0321	0514	4737R	B	
4737	0453	0513	4737R	B		052921	W089.9	0519	0701	4738R	B	
4737	0520	0552	4738R	B				0706	0845	4739A	B	
4738	0640	0658	4738R	B		071637	W116.8	0849	1029	4740A	B	
4738	0706	0739	4739A	B				1033	1216	4741A	B	
4739	0827	0844	4739A	B		090354	W143.6	1221	1401	4742A	B	
4739	0849	0926	4740A	B				1405	1543	4743A	B	
4740	1015	1028	4740A	B		105110	W170.4	1548	1724	4744A	B	
4740	1033	1113	4741A	B				1729	1911	4745A	B	
4741	1202	1215	4741A	B		123827	E162.8	1916	2059	4746A	B	
4741	1221	1301	4742A	B				2104	2246	4747A	B	
4742	1349	1400	4742A	B		142543	E136.0					
4742	1405	1448	4743A	B								
4743	1537	1542	4743A	B		161300	E109.2					
4743	1548	1635	4744A	B								
4744	1728	1823	4745A	B		180016	E082.3					
4745	1916	2010	4746A	B		194733	E055.5					
4746	2104	2157	4747A	B		213449	E028.7					
4747						232206	E001.9					

TABLE 2-2
DATA AVAILABILITY ON-OFF TIMES
30 NOVEMBER 1973

THIR							ESMR				
DATA ORBIT	11.5 + 6.7 ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S	THIR GRID CORR LALO	ASC. AND DESC. NODE TIME HRMNSS	LONG DEG	DATA ORBIT	ON HRMN	OFF HRMN	INT ORBIT + STDN	H D R S
	DAYTIME THIR					ASC. NODE						
4748						001552	E168.4	4749	0048	0240	4751R	A
4749	0132	0220	4751R	A		020308	E141.6	4750	0234	0429	4750R	B
4750	0319	0407	4750R	B		035025	E114.8	4751	0435	0616	4751R	B
4751	0506	0555	4751R	B		053741	E088.0	4752	0621	0757	4752A	B
4752	0653	0742	4752A	B		072458	E061.2	4753	0801	0944	4753A	B
4753	0841	0929	4753A	B		091214	E034.3	4754	0949	1130	4754A	B
4754	1028	1117	4754A	B		105931	E007.5	4755	1137	1311	4755A	B
4755	1215	1304	4755A	B		124647	W019.3	4756	1320	1500	4756A	B
4756	1403	1451	4756A	B		143404	W046.1	4757	1505	1644	4757A	B
4757	1550	1638	4757A	B		162120	W072.9	4758	1649	1825	4758A	B
4758	1737	1824	4758A	B		180837	W099.8	4759	1830	2010	4759A	B
4759	1924	2010	4759A	B		195553	W126.6	4760	2016	2159	4760A	B
4760	2112	2158	4760A	B		214310	W153.4					
4761						233026	E179.8					
	NIGHTTIME THIR					DESC. NODE		NEMS - SCR - ITPR				
4748	0048	0132	4751R	A		010922	W025.0	0048	0240	4751R	A	
4749	0220	0240	4751R	A		025639	W051.8	0234	0429	4750R	B	
4749	0235	0319	4750R	B				0434	0616	4751R	B	
4750	0407	0428	4750R	B		044355	W078.6	0621	0757	4752A	B	
4750	0434	0506	4751R	B				0801	0944	4753A	B	
4751	0555	0615	4751R	B		063112	W105.4	0949	1130	4754A	B	
4751	0621	0653	4752A	B				1137	1311	4755A	B	
4752	0742	0756	4752A	B		081828	W132.2	1321	1459	4756A	B	
4752	0801	0841	4753A	B				1504	1644	4757A	B	
4753	0929	0943	4753A	B		100545	W159.0	1649	1825	4758A	B	
4753	0948	1028	4754A	B				1830	2011	4759A	B	
4754	1117	1132	4754A	B		115301	E174.1	2016	2157	4760A	B	
4754	1137	1215	4755A	B								
4755	1304	1315	4755A	B		134018	E147.3					
4755	1321	1403	4756A	B								
4756	1451	1458	4756A	B		152734	E120.5					
4756	1504	1550	4757A	B								
4757	1638	1643	4757A	B		171451	E093.7					
4757	1649	1737	4758A	B								
4758	1830	1924	4759A	B		190207	E066.9					
4759	2016	2112	4760A	B		204924	E040.0					
4760						223640	E013.2					
4761	0003	0046	4764R	A		002356	W013.6					

SECTION 3

ELECTRICALLY SCANNING MICROWAVE RADIOMETER DISPLAYS

One ESMR display per day has been selected for presentation in this section. All ESMR coverage times are listed in the Data Availability On-Off Times (Table 2-2). Each display contains the following items:

Nimbus 5 ESMR

This identifies the satellite (Nimbus 5) and the experiment (ESMR).

Date

This identifies the Greenwich day, month, and year the data is recorded.

Data Orbit

This data orbit number identifies only the last data orbit on each display. Usually parts of two data orbits are on the same display, since all data acquired during each satellite interrogation is presented on one 4 × 5-inch negative. In general, nighttime data is on the left and daytime data is on the right.

Program

No Program number is identified on these displays. Its intended use was to identify the appropriate table which would list the temperature interval for each gray level in the gray scale. The temperature programs used since launch are listed in Table 3-1.

Table 3-1

ESMR Gray Scale Steps Versus Brightness Temperature for Each of the Three ESMR Swaths in the ESMR Pictorial Displays
(Temperatures in °K)

		Table 1 Orbit 104 through 502			Table 2 Orbit 503 through 4761		
Swath		1	2	3	1	2	3
(black)	1	> 200	> 262	> 280	> 210	> 266	> 290
	2	190-200	256-262	277-280	202-210	258-266	286-290
	3	180-190	250-256	274-277	194-202	250-258	282-286

Table 3-1 (Continued)

		Table 1 Orbit 104 through 502			Table 2 Orbit 503 through 4761		
Swath		1	2	3	1	2	3
Gray Scale Number	4	170-180	240-250	271-274	186-194	242-250	278-282
	5	160-170	230-240	268-271	178-186	234-242	274-278
	6	150-160	220-230	265-268	170-178	226-234	270-274
	7	140-150	210-220	262-265	162-170	218-226	266-270
	8	130-140	200-210	259-262	154-162	210-218	262-266
	9	120-130	190-200	256-259	146-154	202-210	258-262
	10	110-120	180-190	253-256	138-146	194-202	254-258
	(white) 11	< 110	< 180	< 253	< 138	< 194	< 254

Gray Scale

A single 11-step gray scale serves to define ESMR brightness temperatures in all three swaths, by the assignment of a different brightness temperature range to each step for each swath. Table 3-1 defines the gray scale table used on all images since launch.

Image Swaths (1, 2, 3)

A set of three swaths, labeled 1, 2, and 3, separates the same recorded data into three temperature intervals (defined in Table 3-1). The right set of three swaths is a continuation of the left set and is offset because of the limitations of the 4 × 5-inch film format. The three swath presentation is used because it shortens the temperature ranges spanned by each step of the gray scale, and, therefore, permits discrimination of various meteorological and terrestrial phenomena.

Significant in swath 1 are the areas of atmospheric moisture and rainfall over oceans, Swath 2 brightness temperature range discriminates between new and multi-year ice and, over oceans, shows only rainfall areas. The high brightness temperatures of swath 3 outline some land areas of high soil moisture content or snow cover, but oceans lose almost all their temperature contrasts. The swath 3 information was lost because of an instrument malfunction between orbit 1062 (28 February) and orbit 2250 (27 May), and for intervals since orbit 3015 (23 July).

Time Code Index

The Time Code Index, in hours and minutes (GMT), is adjacent to the gray scale. The top number in each set is for the left group of three swaths; the bottom number in each set is for the right group of three swaths. Time bars are spaced at five-minute intervals. The same time bars are used for the left and right swaths. The top or bottom time code index determines the time for each time bar.

Grids

Two grids, labeled GRID L and GRID R; identify the geographic coordinates for the imagery of the left (L) and the right (R) sets of swaths, respectively. Latitude lines are spaced at 10-degree intervals. Longitude lines are spaced at 10-degree intervals to 60 degrees north and south of the equator, and at 20-degree intervals from 60 to 80 degrees north and south. The equator (EQ), North Pole (NP), and South Pole (SP) are labeled, as well as longitude values at the equator and at 30 and 60 degrees north and south of the equator.

Swath Display Program

The antenna gain function is different at each beam position. Thus, to present a uniform surface temperature as the same shade of gray across a scan track requires that the output voltage at each antenna position be adjusted for its beam position and output voltage value. If the corrections are not precise, vertical bands will be evident in the ESMR pictorial displays.

Three different sets of calibration constants (Display Format Programs) were used during the first two months of operation to eliminate these vertical bands. Two additional programs have been used since the instrument malfunction of 28 February 1973. Volume 1 of this catalog series illustrates the vertical banding produced by the first three programs, while the images in this section illustrate the banding produced by the last two. After 27 May, Program 5 was used for image displays whenever the instrument was operating normally. Table 3-2 shows the Display Format Programs used during this catalog period.

Table 3-2

ESMR Display Format Programs for October and November 1973

Orbits Processed with Display Format Program 5		Orbits Processed with Display Format Program 6	
Date	Orbits	Date	Orbits
1- 7 October	3945-4036	7- 8 October	4039-4046
8-13 October	4047-4110	13-16 October	4110-4145
16-18 October	4146-4181	18 October	4182
18-20 October	4183-4210	20 October	4211
21 October	4213-4218	21 October	4219
21-22 October	4220-4234	22 October	4235
22-25 October	4236-4273	25 October	4274-4276
25 Oct. - 5 Nov.	4277-4420	5 November	4421

Table 3-2 (Continued)

Orbits Processed with Display Format Program 5		Orbits Processed with Display Format Program 6	
Date	Orbits	Date	Orbits
5 November	4422	5 November	4423-4426
6- 8 November	4428-4460	8 November	4461-4465
9 November	4467-4480	10 November	4482-4492
11-13 November	4494-4532	14 November	4536-4544
14-28 November	4545-4729	28-30 November	4730-4760

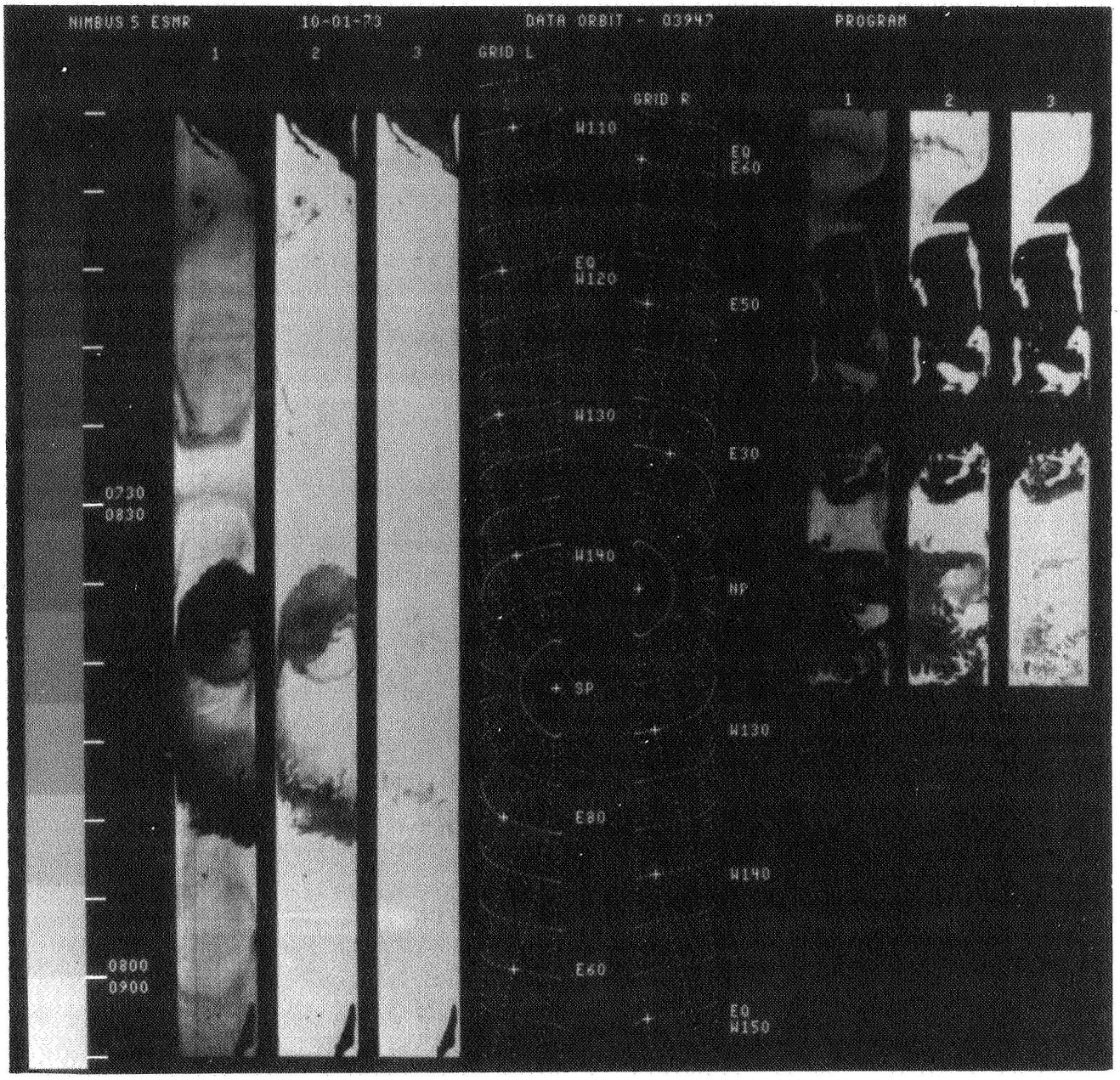
Program 5 is used whenever the instrument is operating normally (data in all three swaths).

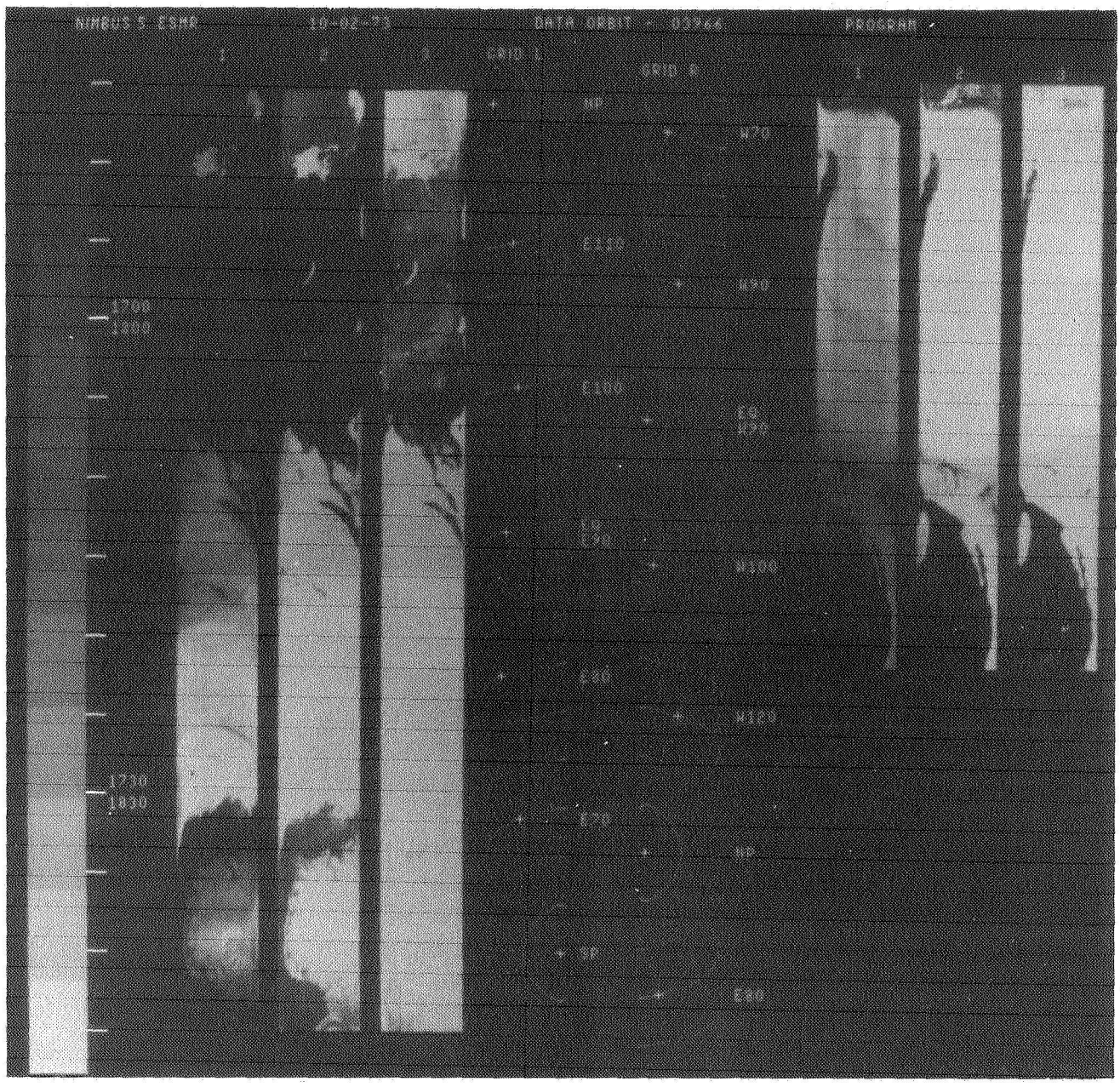
Program 6 is used whenever the instrument is operating in the reduced response mode (data only in swaths one and two).

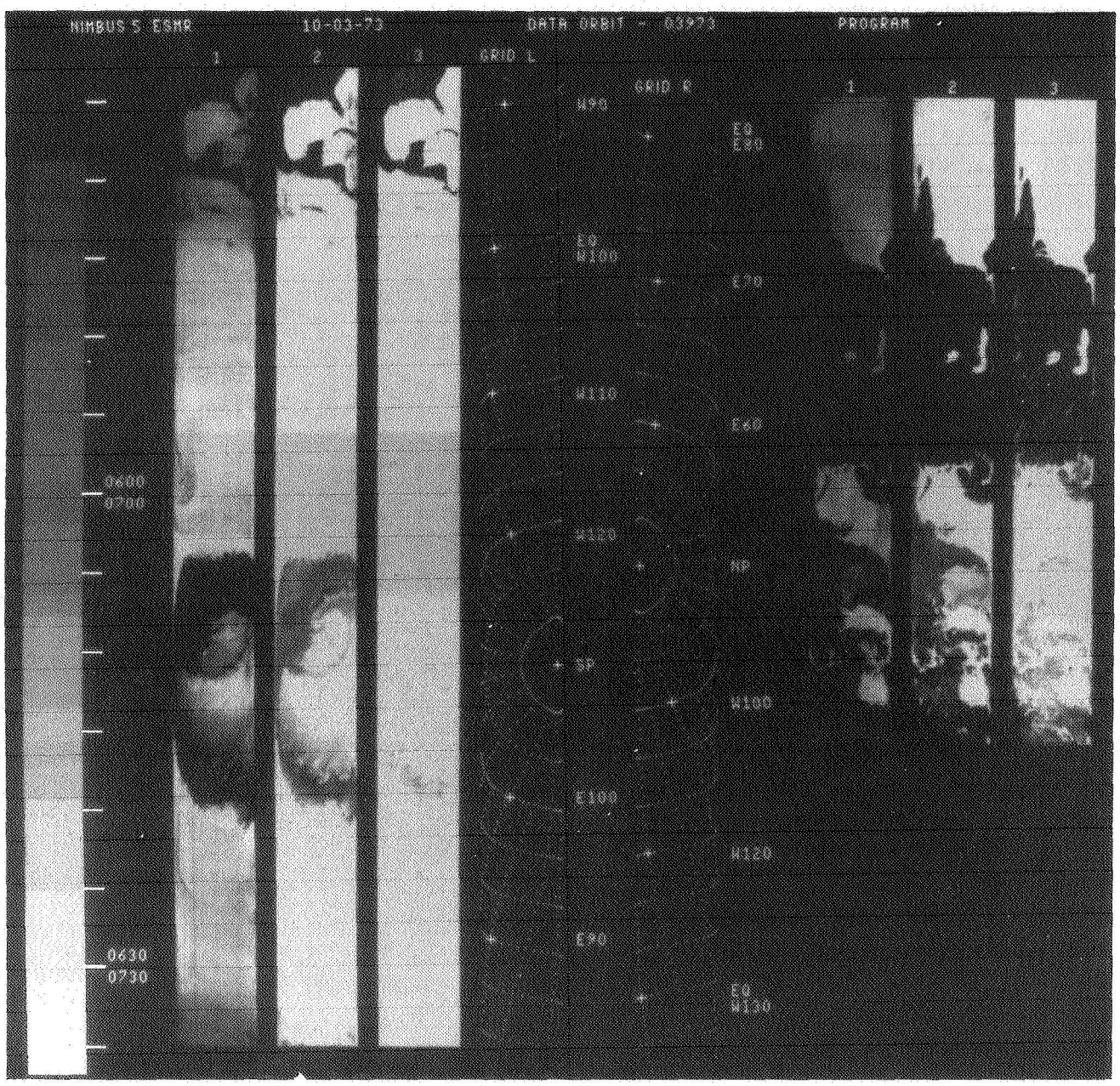
All orbits were processed with Gray Scale Brightness Temperature Table 2 values (See Table 3-1).

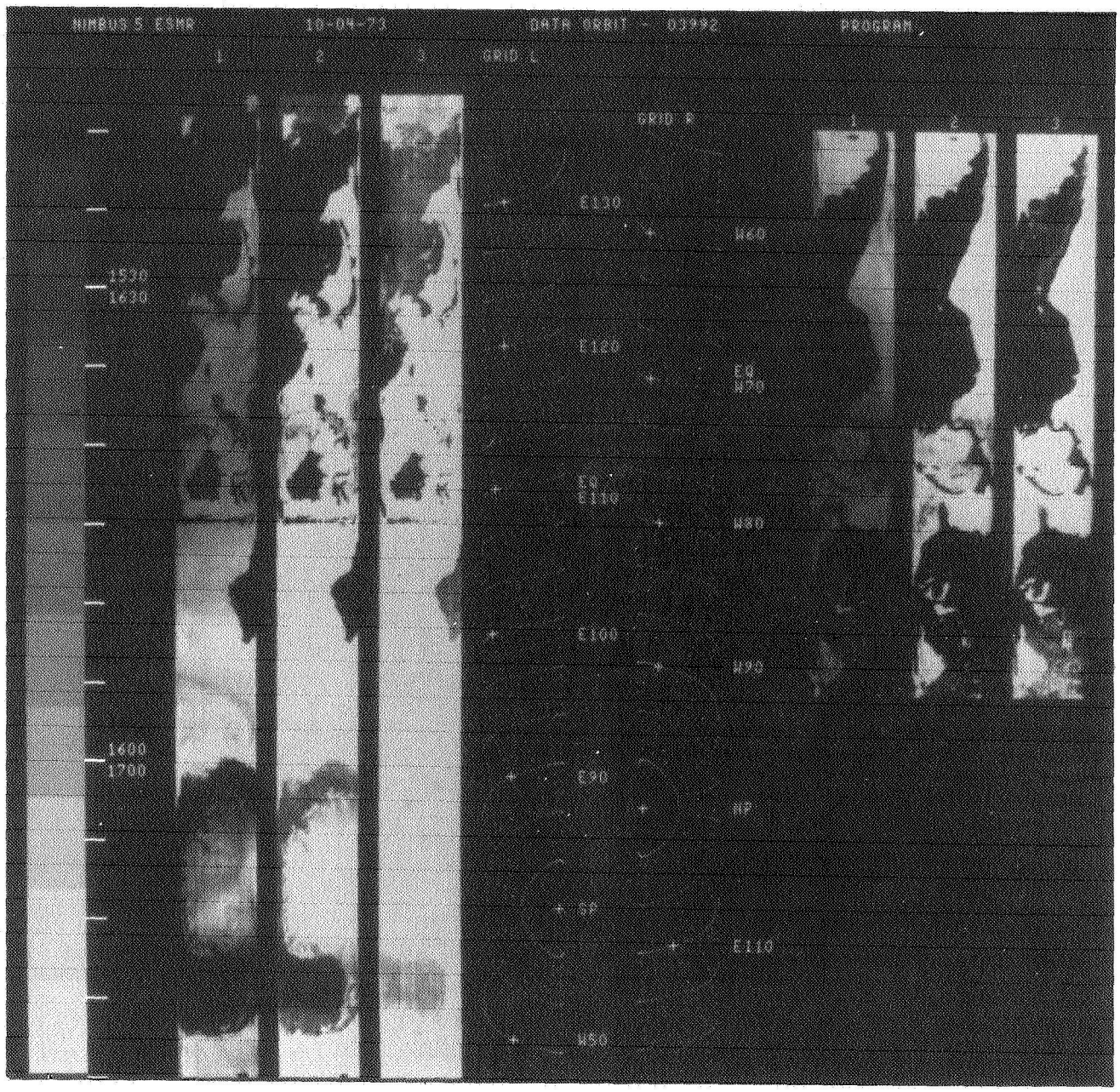
The brightness temperature accuracy varied with each Display Format Program. With display Program 1, which uses prelaunch calibration constants, the digital brightness temperature values have about ±20°K accuracy. With a change to postlaunch calibration constants, Programs 2 and 4 produce about ±2° to 5°K temperature value accuracies. Of course, with Programs 2 and 4, the displayed temperature values are accurate only within the limits of the temperature range of each step of the gray scales as defined in Table 3-1. Display Programs 5 and 6 used after the instrument malfunction of 28 February 1973, are considered to produce ±10°K temperature accuracies on the image displays.

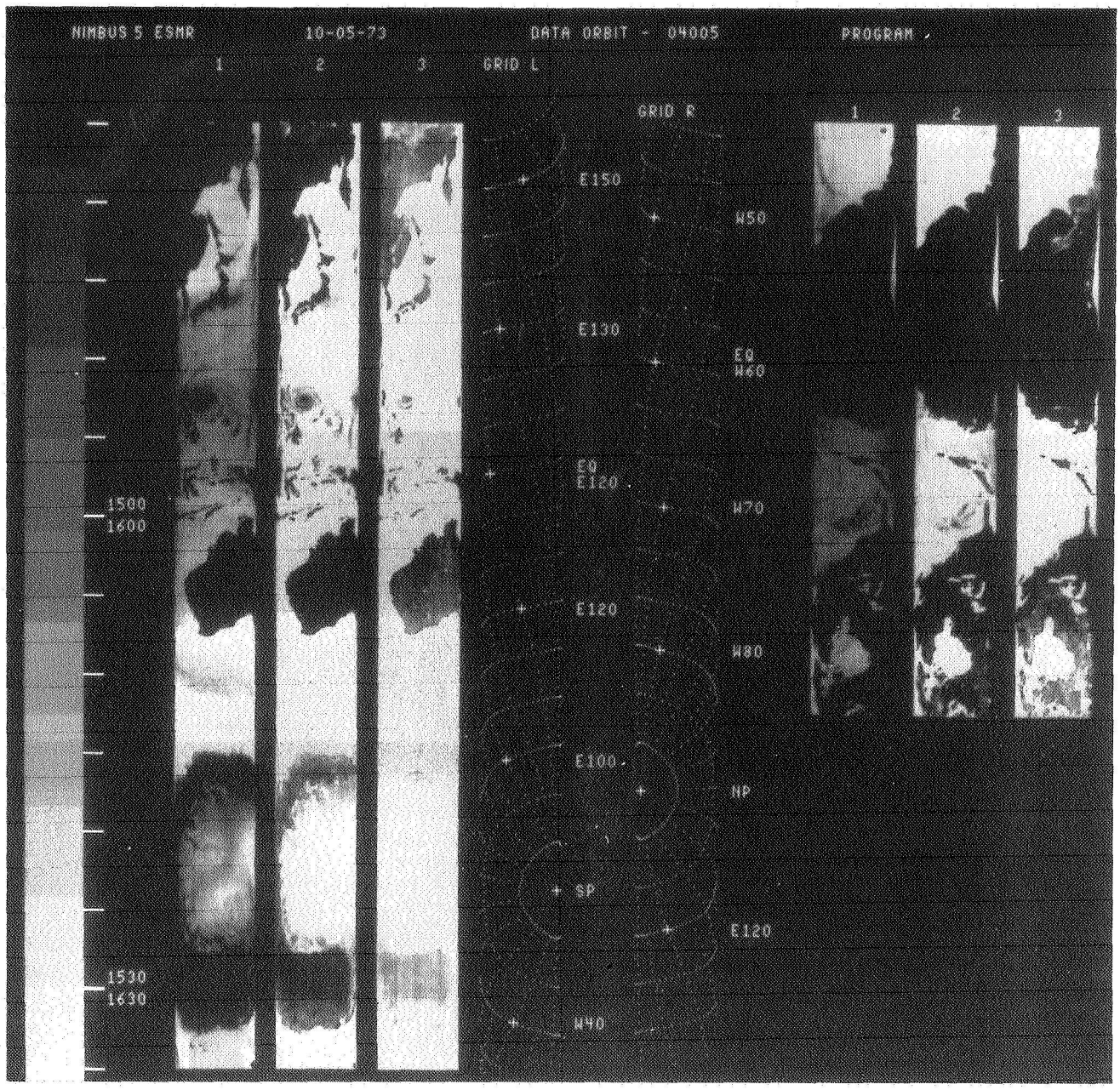
A description of the ESMR experiment may be found in The Nimbus 5 User's Guide, Section 4, and instructions for ordering the data, both pictorial and digital, are in Section 1. 7 of that Guide.

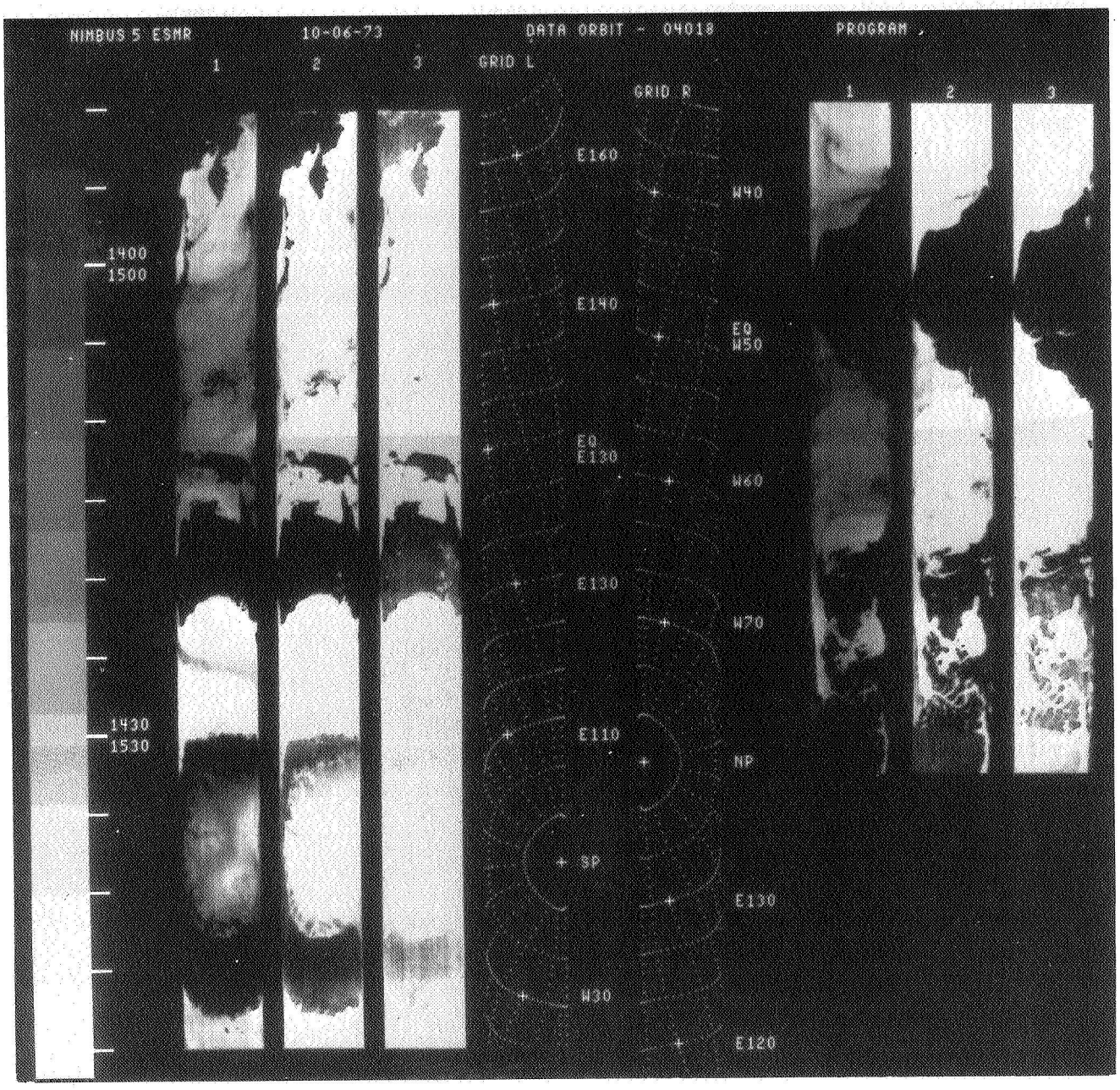

NIMBUS 5 ESMR
10-01-73
DATA ORBIT - 03947
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W110
EQ
E20
EQ
W120
E50
W130
E30
0730
0830
W140
NP
SP
W130
E80
W140
0800
0900
E60
EQ
W150

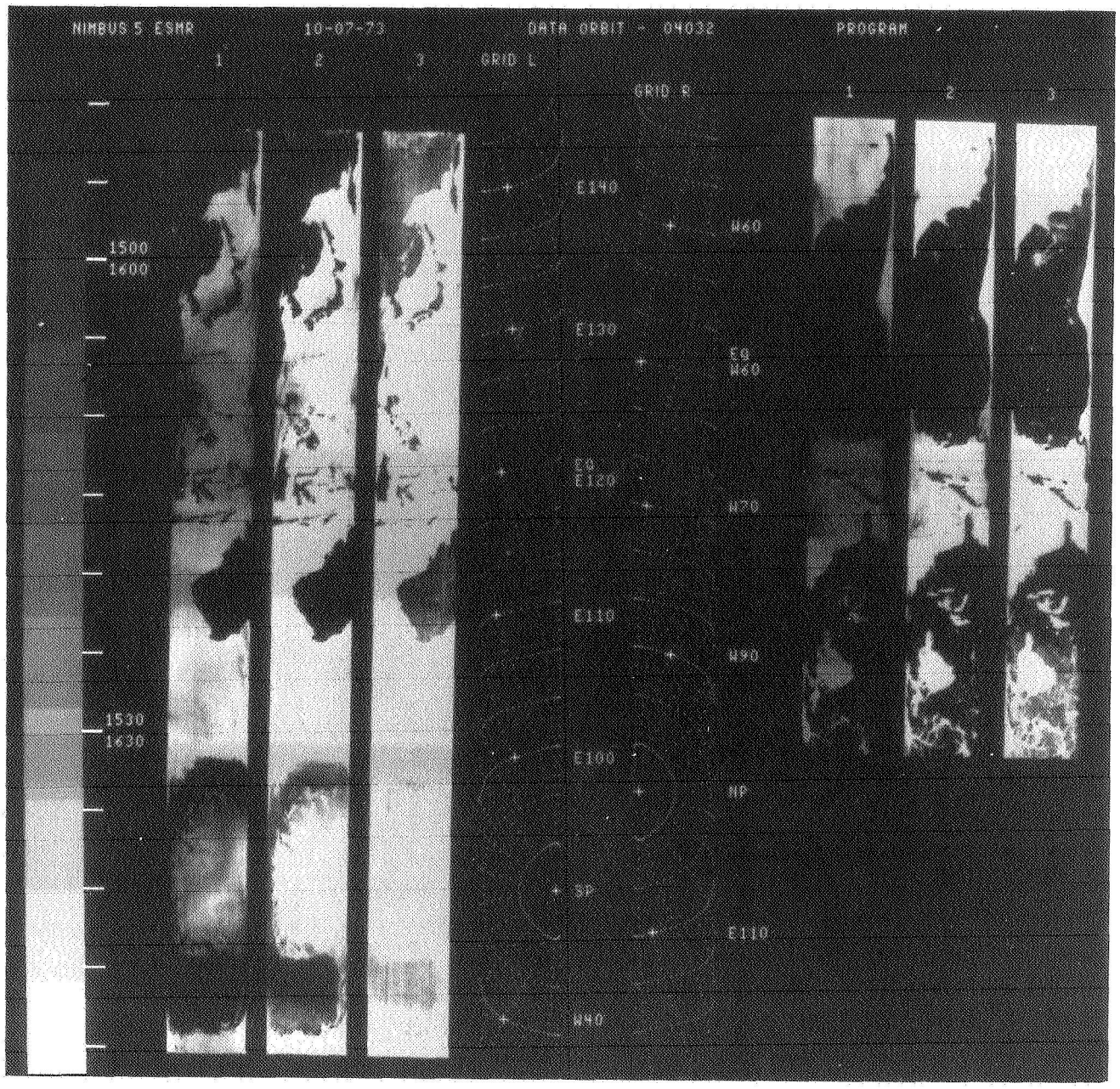

NIMBUS 5 ESMR
10-02-73
DATA ORBIT - 03944
PROGRAM -
GRID L
GRID R
1700
1930
1710
1930

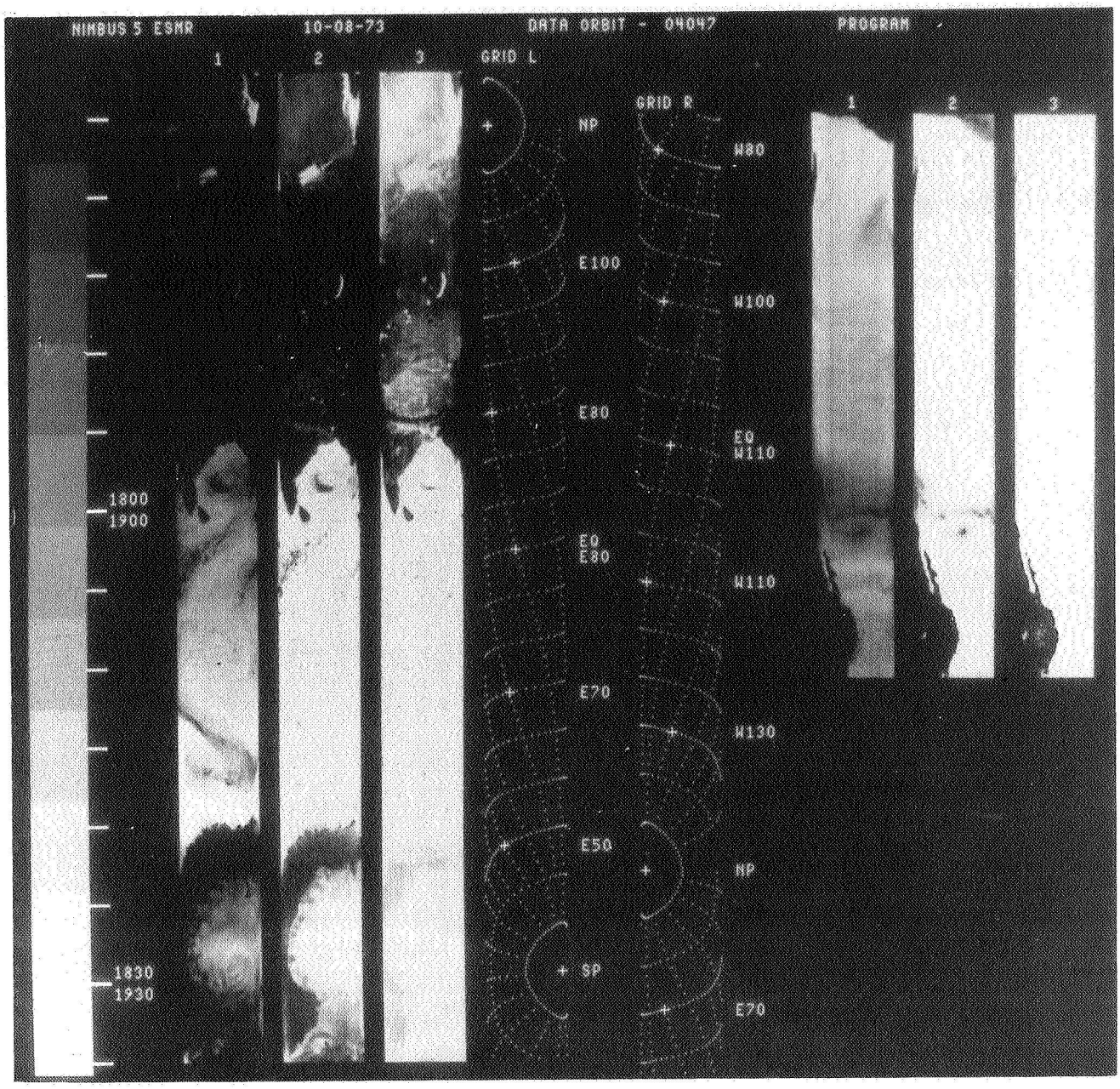

NIMBUS 5 ESMR
10-03-73
DATA ORBIT - 03973
PROGRAM
GRID L
GRID R
1
2
3
W90
EQ
E90
EQ
W100
E70
W110
E40
0600
0700
W120
NP
SP
W100
E100
W120
E90
0630
0730
EQ
W130

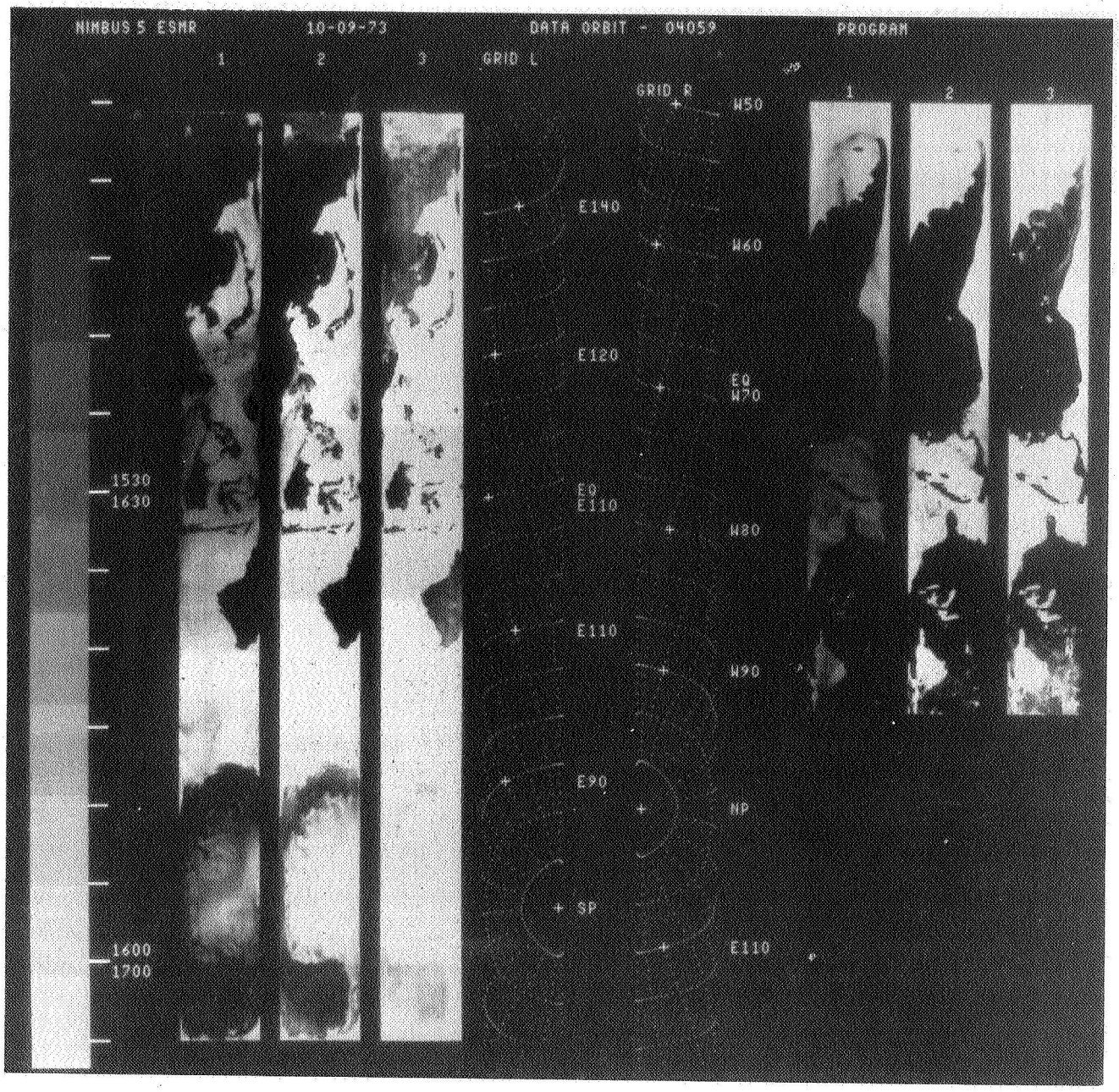

NIMBUS 5 ESMR
10-04-73
DATA ORBIT - 03992
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E120
W20
1530
1420
E120
E0
W30
E0
E110
W30
E100
W90
1400
1700
E90
NP
SP
E110
W50

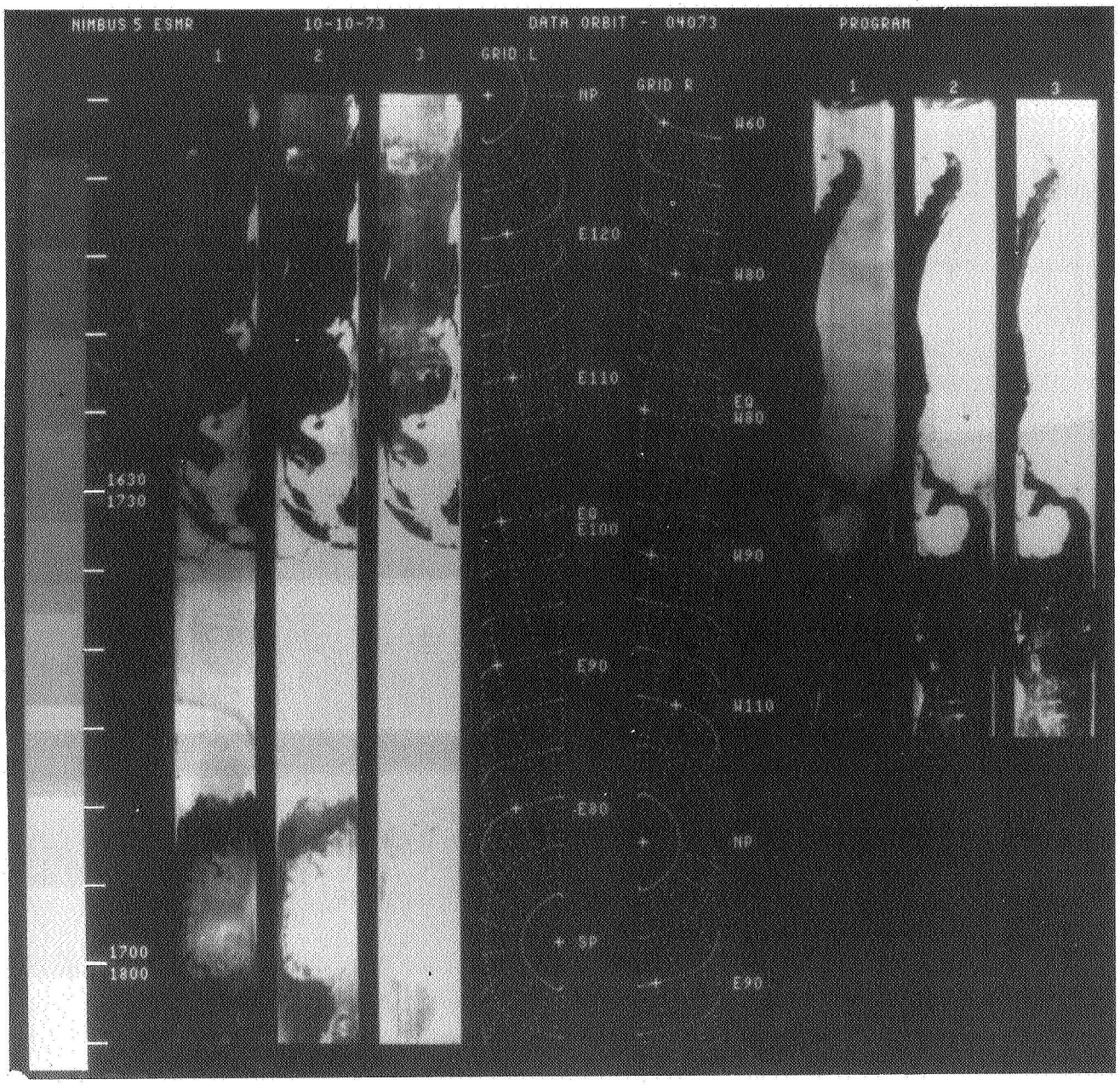

NIMBUS 5 ESMR
10-05-73
DATA ORBIT - 04005
PROGRAM -
1
2
3
GRID L
GRID R
1
2
3
E150
W50
E130
EQ
W60
EQ
E120
W70
E120
W80
E100
NP
SP
E120
W40
1500
1600
1530
1630

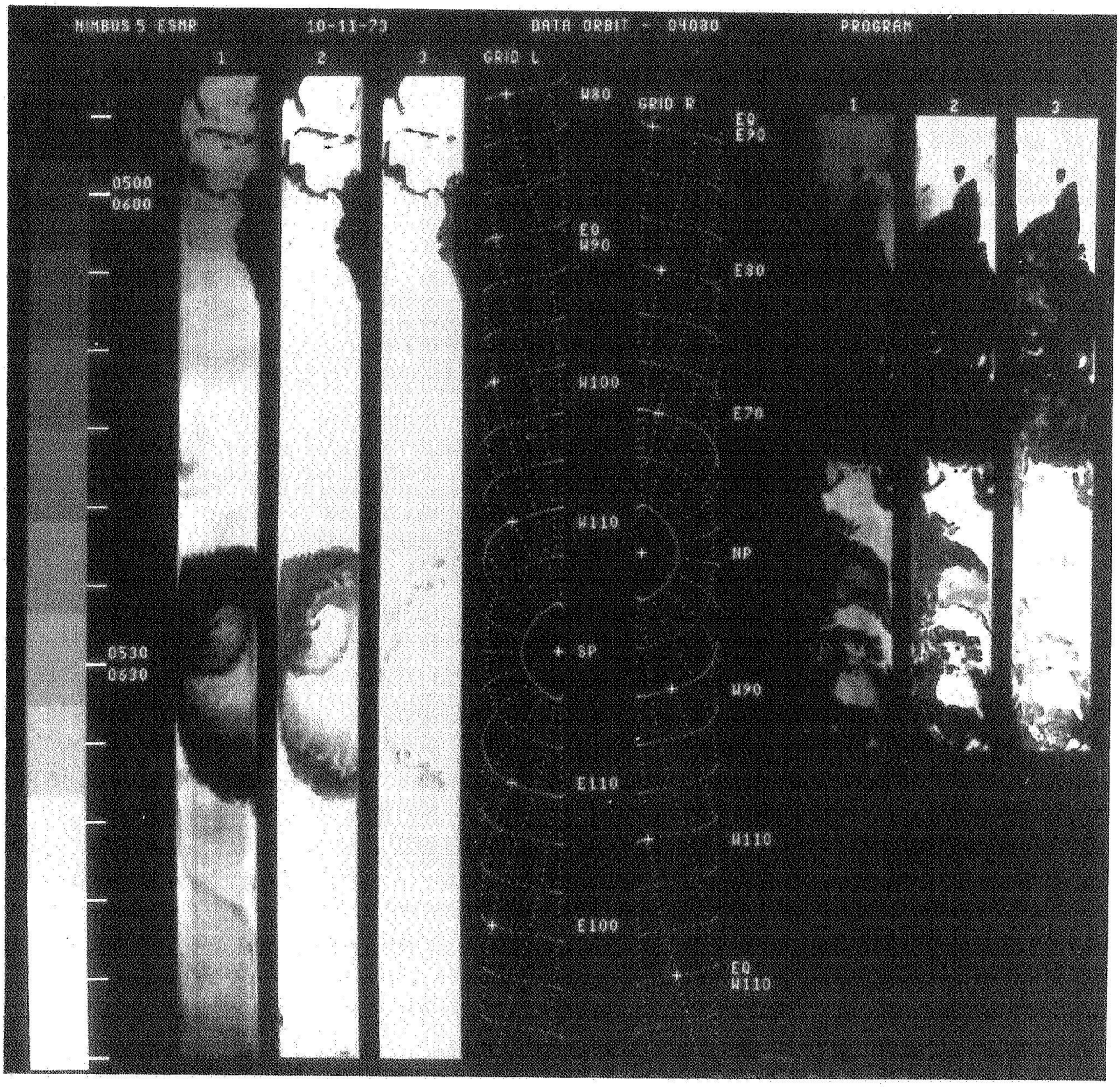

NIMBUS 5 ESMR
10-06-73
DATA ORBIT - 04018
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E160
W40
E140
EQ
W50
EQ
E130
W60
E130
W70
E110
NP
SP
E130
W30
E120
1400
1500
1430
1530

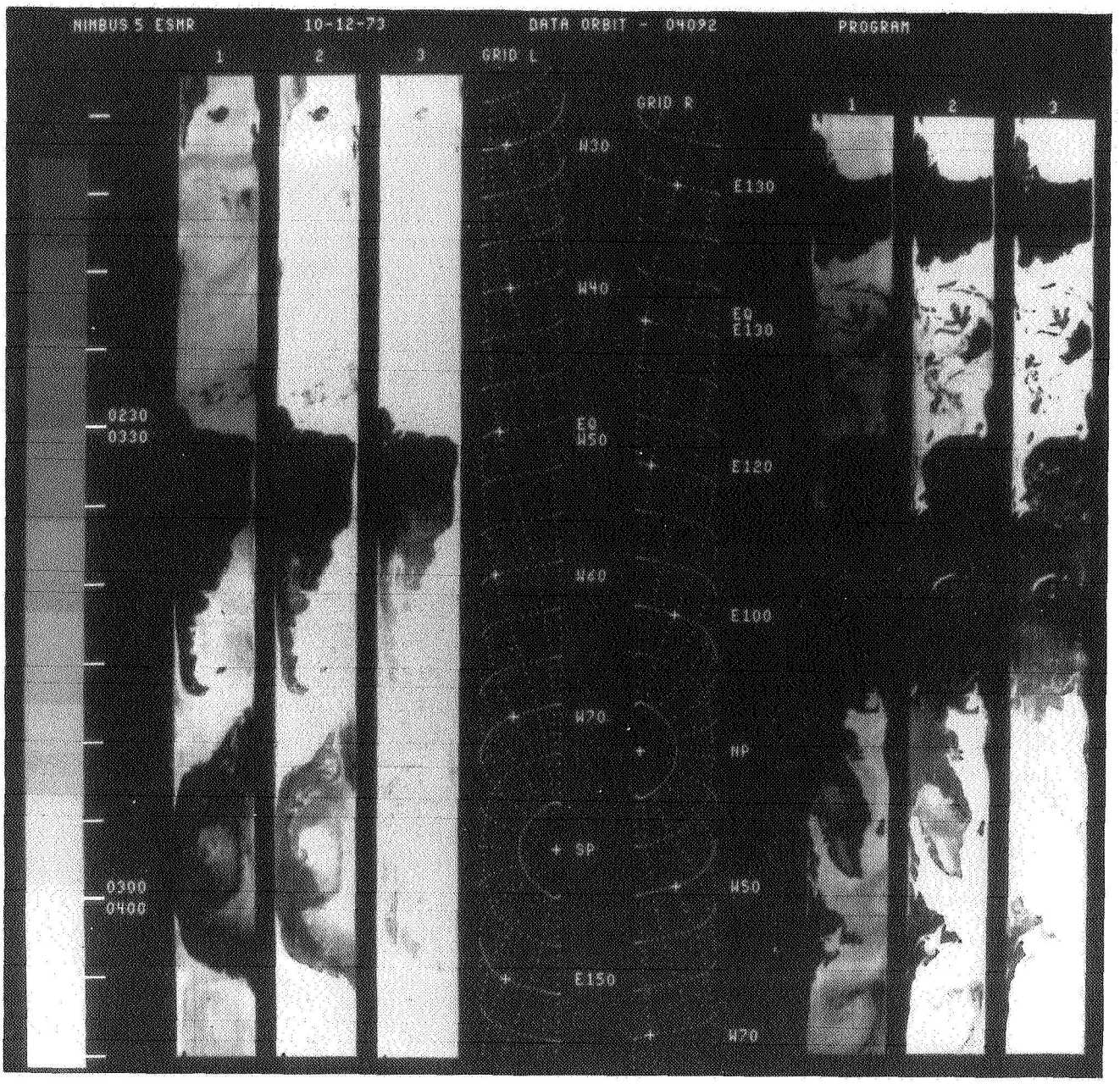

NIMBUS 5 ESMR
10-07-73
DATA ORBIT - 04032
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E140
W60
E130
EQ
W60
EQ
E120
W70
E110
W90
E100
NP
SP
E110
W40
1500
1600
1530
1630

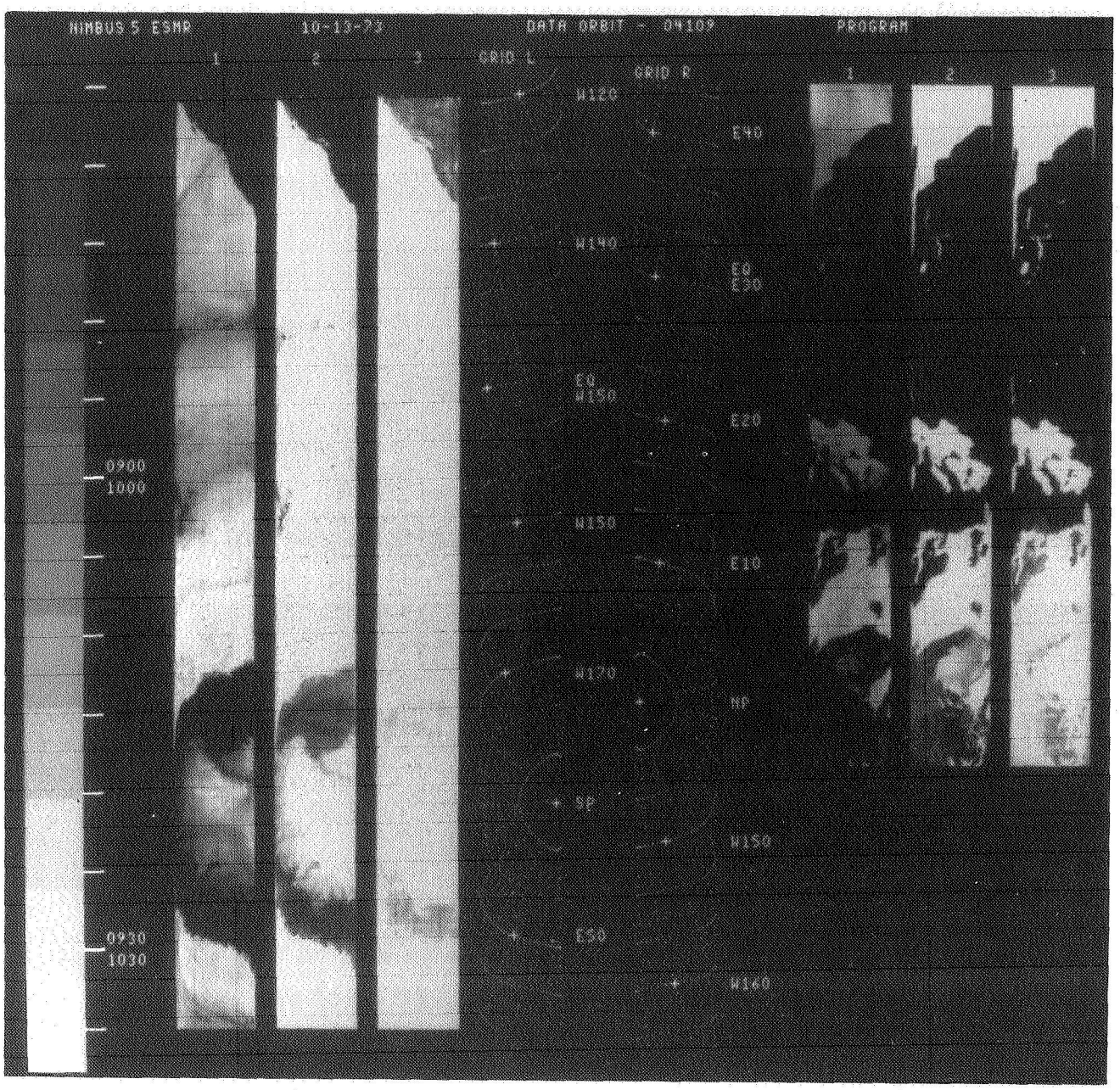

NIMBUS 5 ESMR
10-08-73
DATA ORBIT - 04047
PROGRAM
1
2
3
GRID L
GRID R
NP
E100
E80
E0
E80
E70
E50
SP
W80
W100
E0
W110
W110
W130
NP
E70
1800
1900
1830
1930

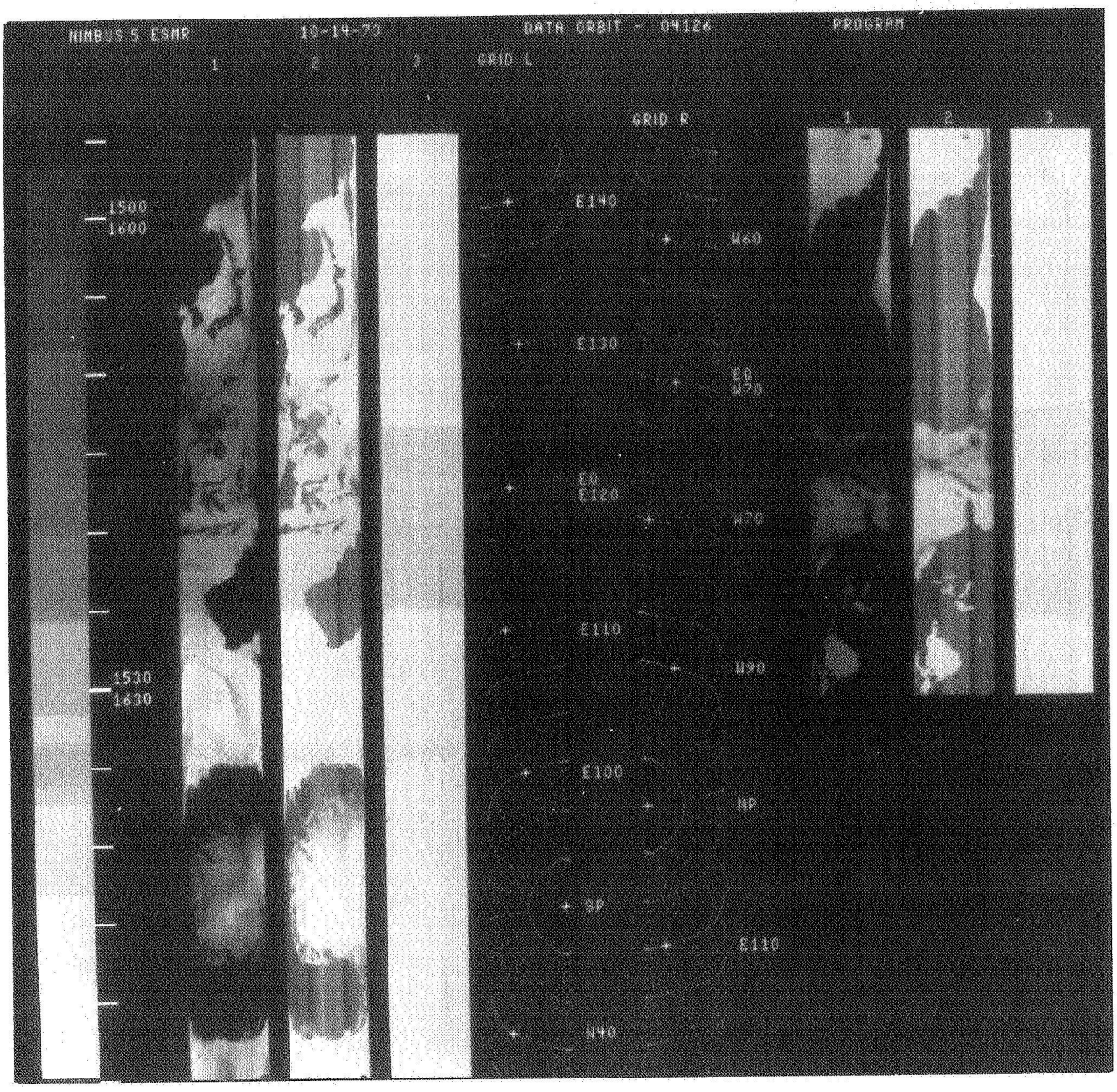

NIMBUS 5 ESMR
10-09-73
DATA ORBIT - 04059
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W50
E140
W60
E120
E0
W70
1530
1630
E0
E110
W80
E110
W90
E90
NP
SP
E110
1600
1700

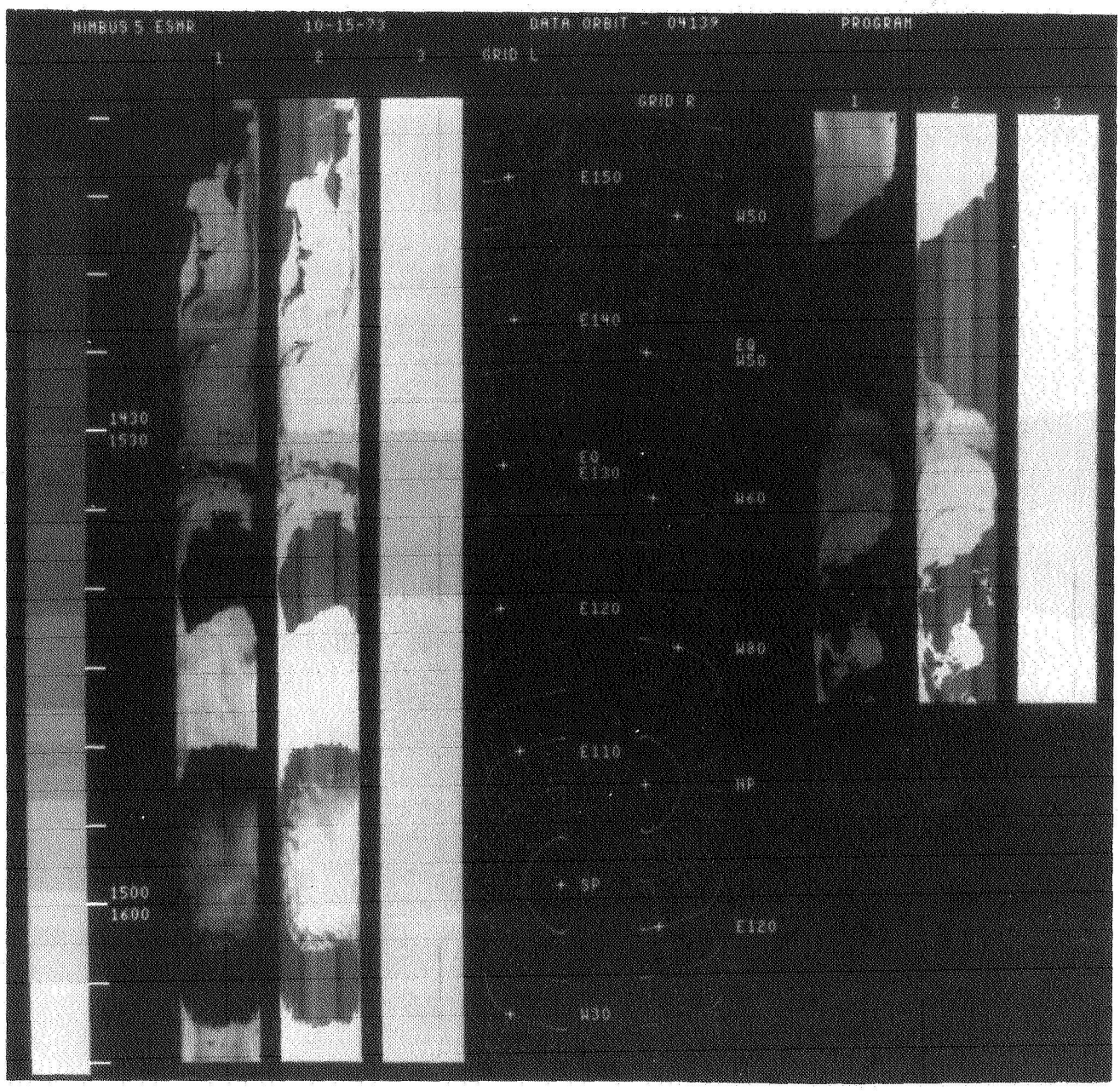

NIMBUS 5 ESMR
10-10-73
DATA ORBIT - 04073
PROGRAM
1
2
3
GRID L
GRID K
NP
W60
E120
W30
E110
E0
W30
E0
E100
W30
E90
W110
E80
NP
SP
E70
1630
1730
1700
1800

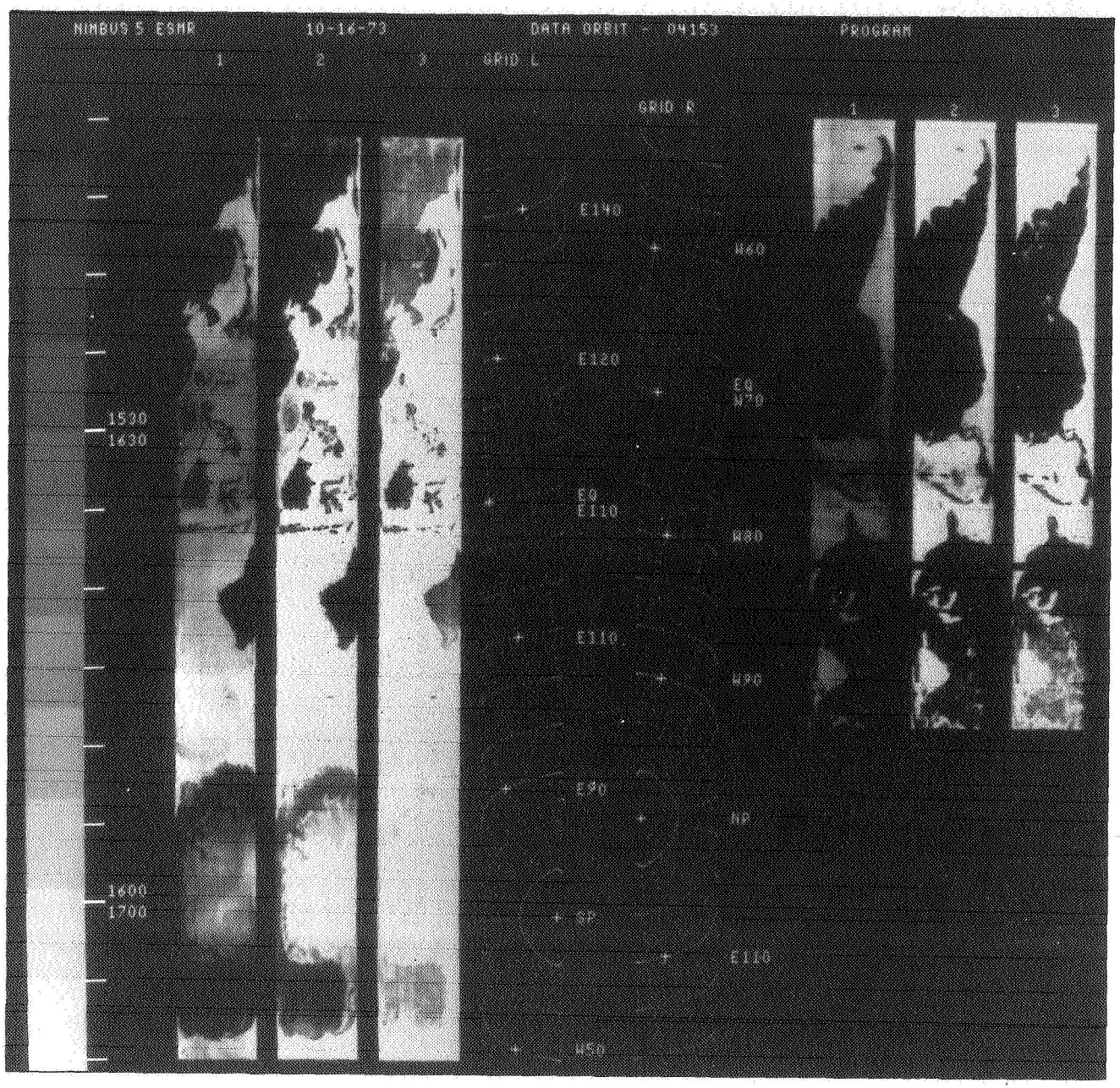

NIMBUS 5 ESMR
10-11-73
DATA ORBIT - 04030
PROGRAM
1
2
3
GRID L
GRID R
0500
0600
0530
0630
W80
EQ
W90
W100
W110
SP
E110
E100
EQ
E90
E80
E70
NP
W90
W110
EQ
W110

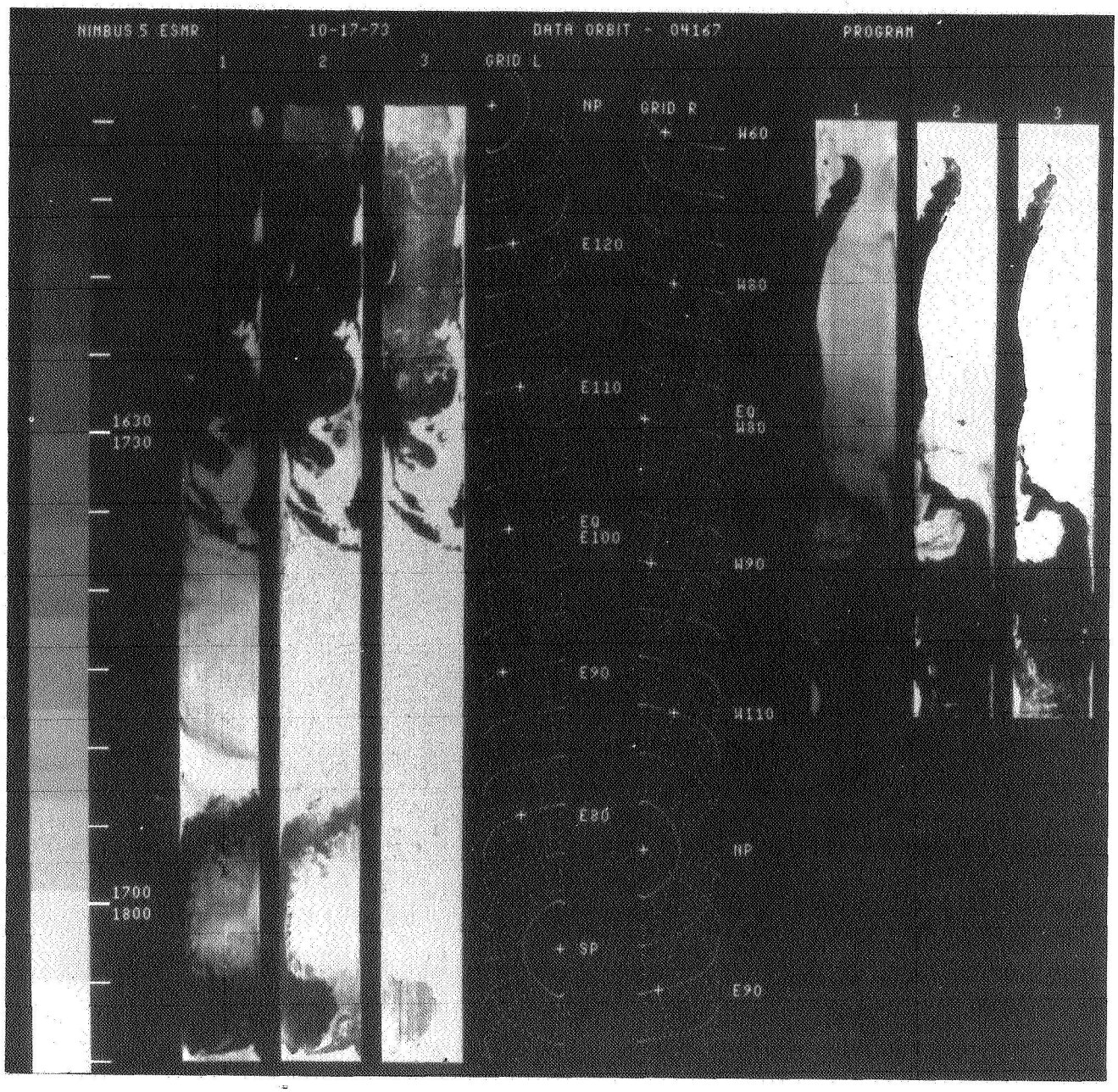

NIMBUS 5 ESMR
10-12-73
DATA ORBIT - 04092
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W30
E130
W40
EQ
E130
EQ
W50
E120
W60
E100
W70
NP
SP
W50
E150
W70
0230
0330
0300
0400

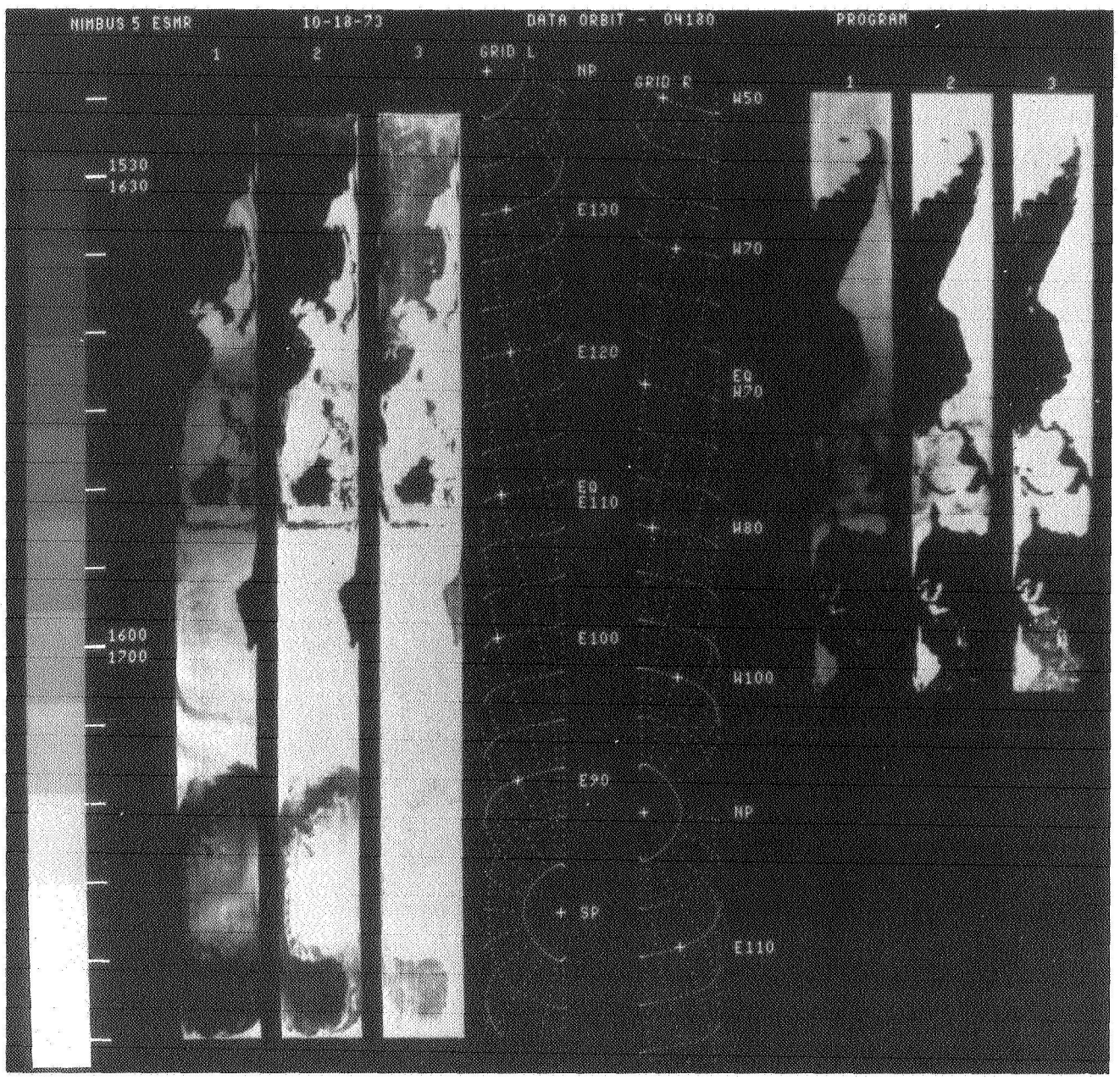

NIMBUS 5 ESMR
10-13-73
DATA ORBIT - 04109
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W120
E40
W140
EQ
E30
EQ
W150
E20
0900
1000
W130
E10
W170
NP
SP
W150
0930
1030
E50
W160

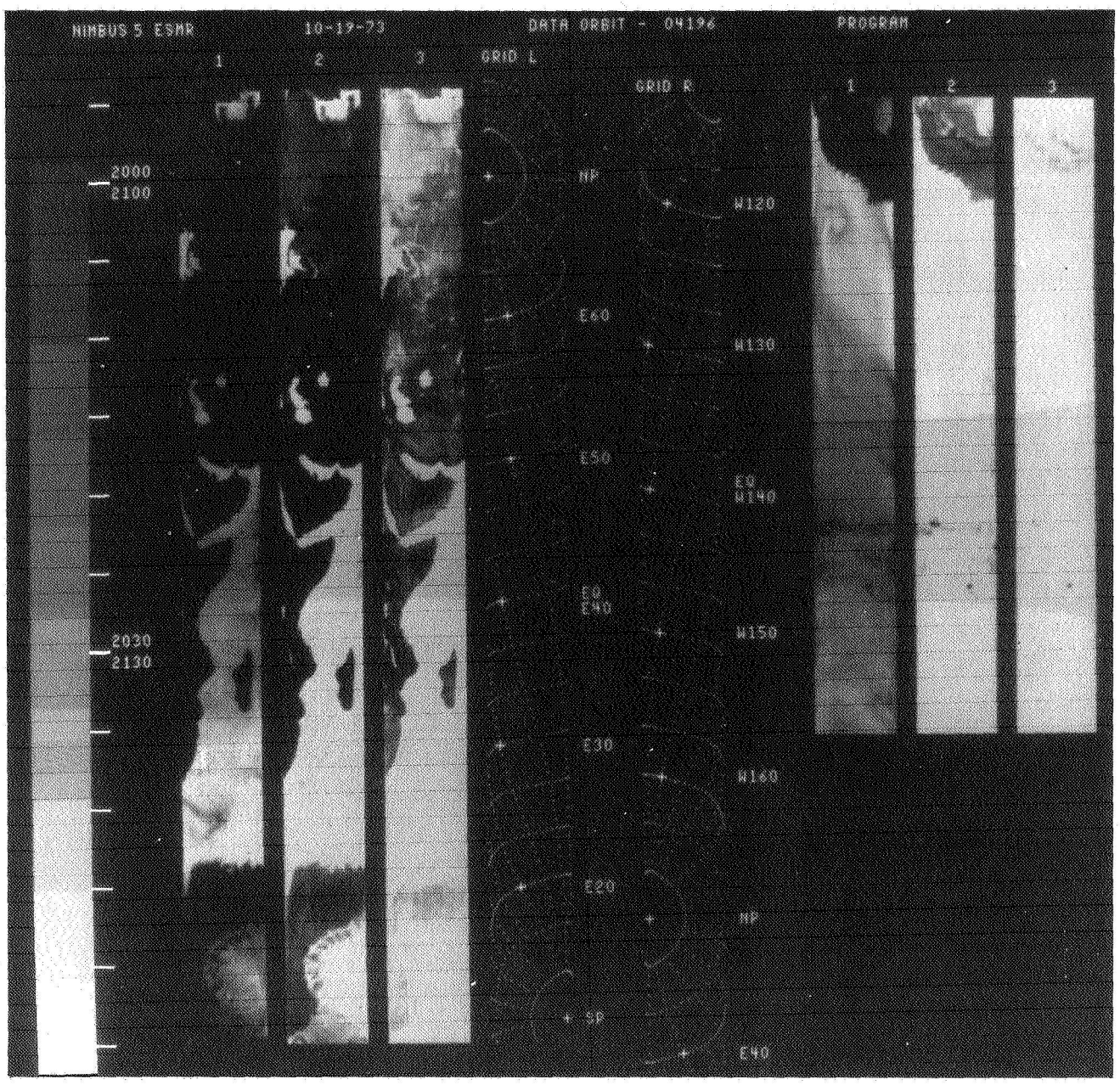

NIMBUS 5 ESMR
10-14-73
DATA ORBIT - 04126
PROGRAM
1
2
3
GRID L
GRID R
1500
1600
1530
1630
E140
W60
E130
EQ
W70
EQ
E120
W70
E110
W90
E100
NP
SP
E110
W40

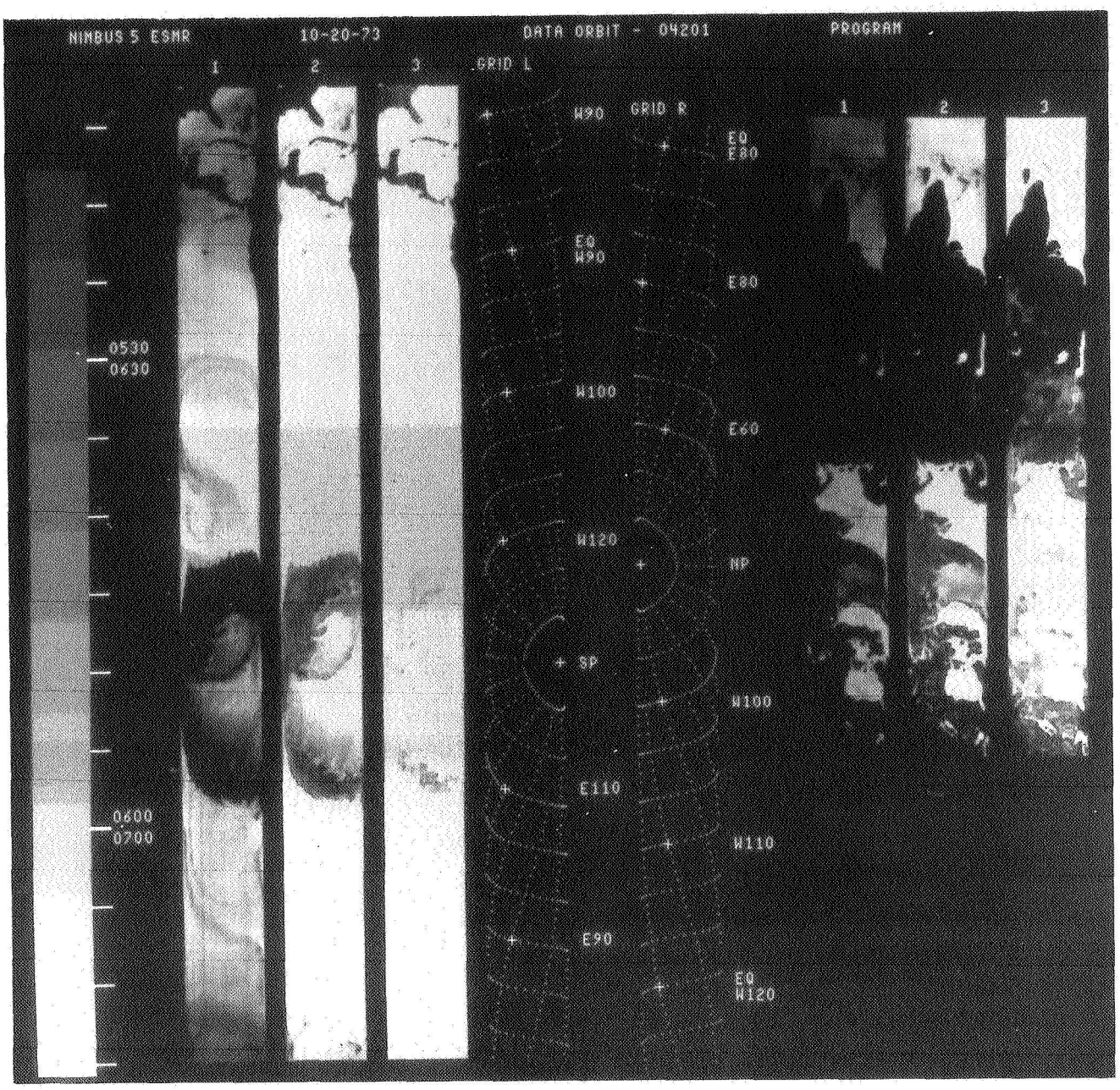

NIMBUS 5 ESMR
10-15-73
DATA ORBIT - 04139
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E150
W50
E140
E0
W50
1430
1530
E0
E130
W40
E120
W30
E110
HP
1500
1600
SP
E120
W30

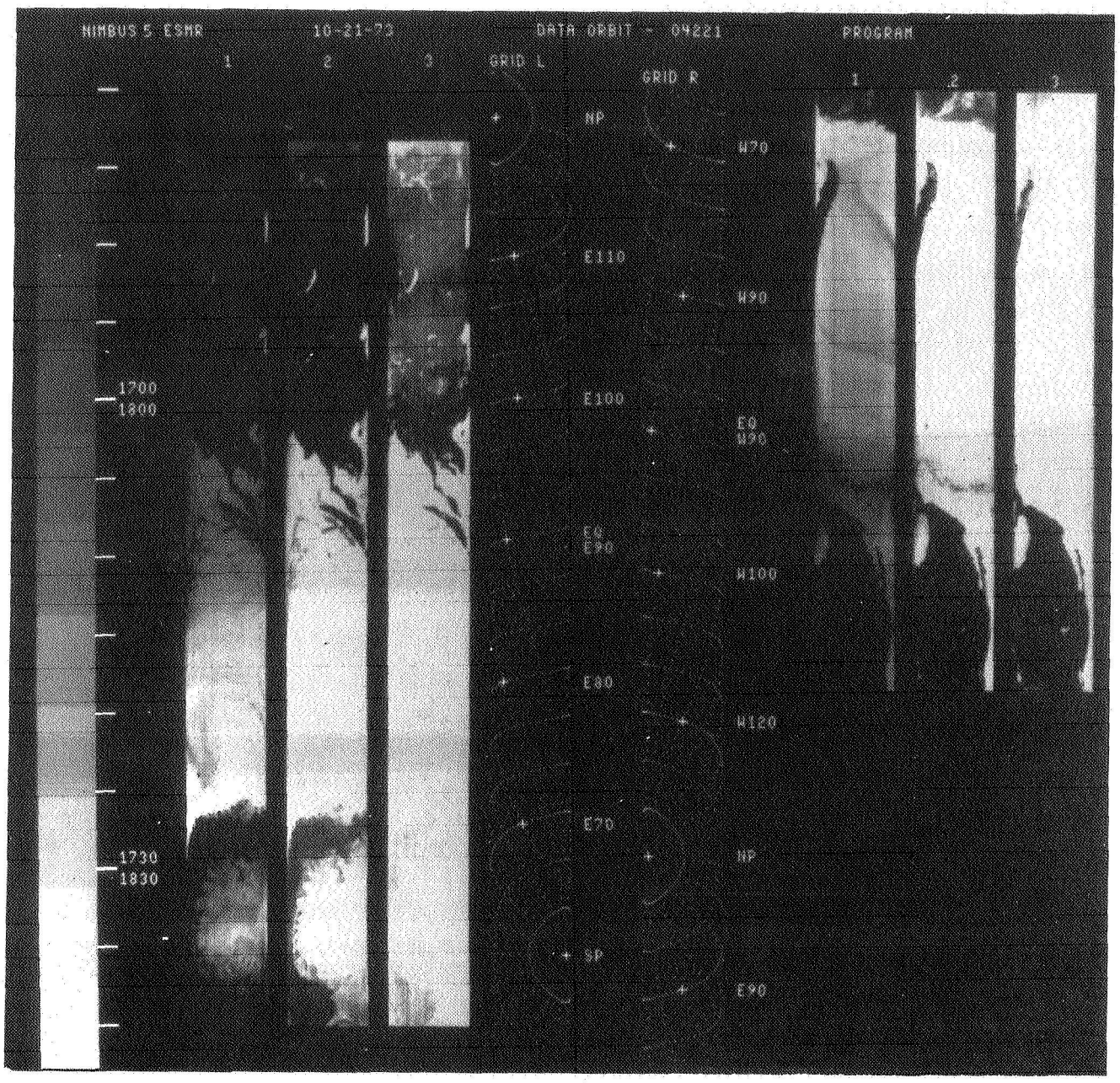

NIMBUS 5 ESMR
10-16-73
DATA ORBIT - 04153
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E140
W40
E120
EQ
W70
EQ
E110
W80
E110
W90
E90
NP
SP
E110
W50
1530
1630
1600
1700


NIMBUS 5 ESMR
10-17-72
ORBIT - 04167
PROGRAM
1
2
3
GRID L
GRID R
NP
W60
E120
W30
E110
EQ
W30
1630
1730
EQ
E100
W90
E90
W110
E80
NP
1700
1800
SP
E90

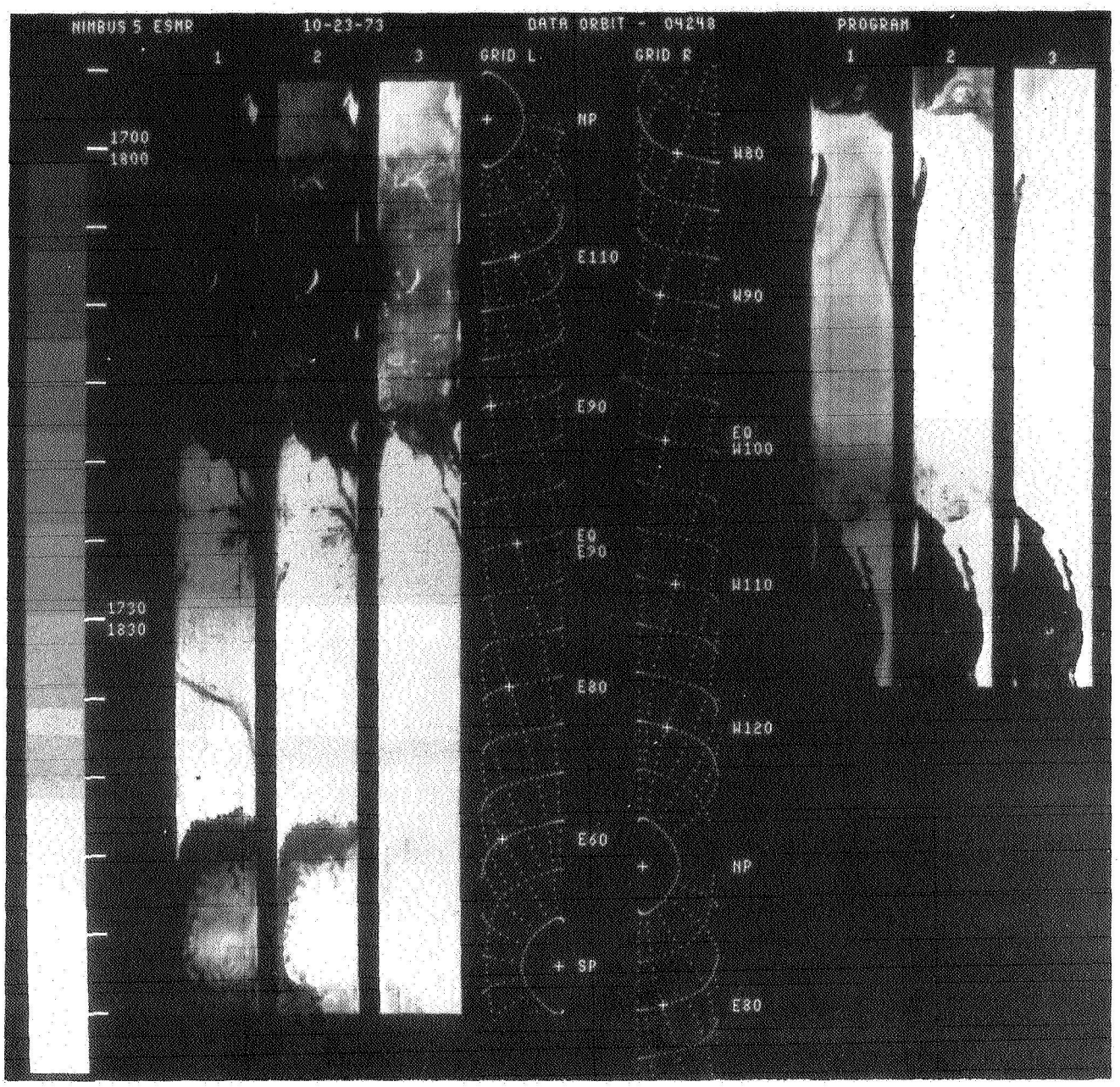

NIMBUS 5 ESMR
10-18-73
DATA ORBIT - 04180
PROGRAM
1
2
3
GRID L
NP
GRID R
W50
1530
1430
E130
W70
E120
EQ
W70
EQ
E110
W80
1600
1700
E100
W100
E90
NP
SP
E110

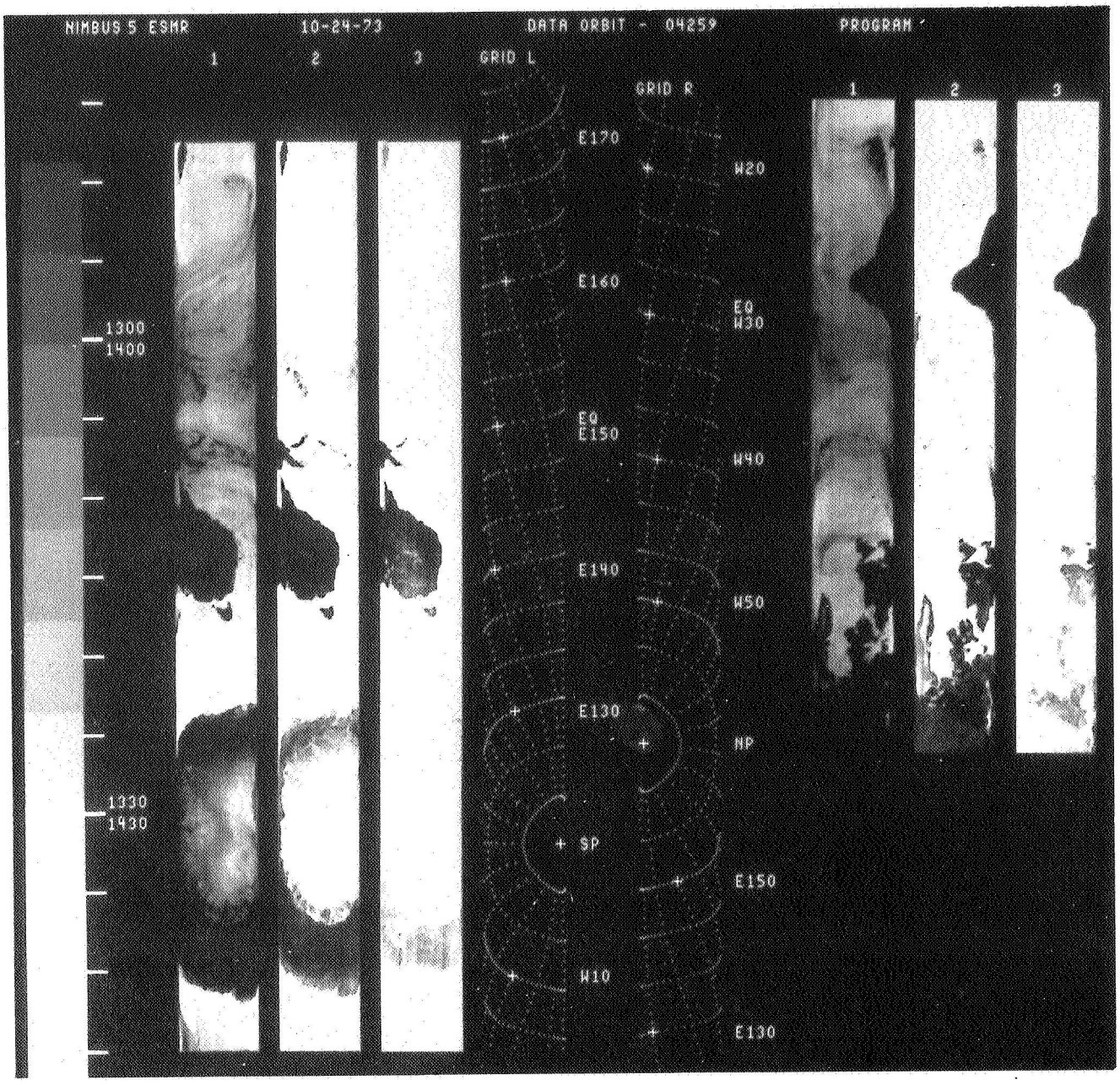

NIMBUS 5 ESMR
10-17-73
DATA ORBIT - 04196
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
2000
2100
2030
2130
NP
W120
E60
W130
E50
EQ
W140
EQ
E40
W150
E30
W160
E20
NP
SP
E40

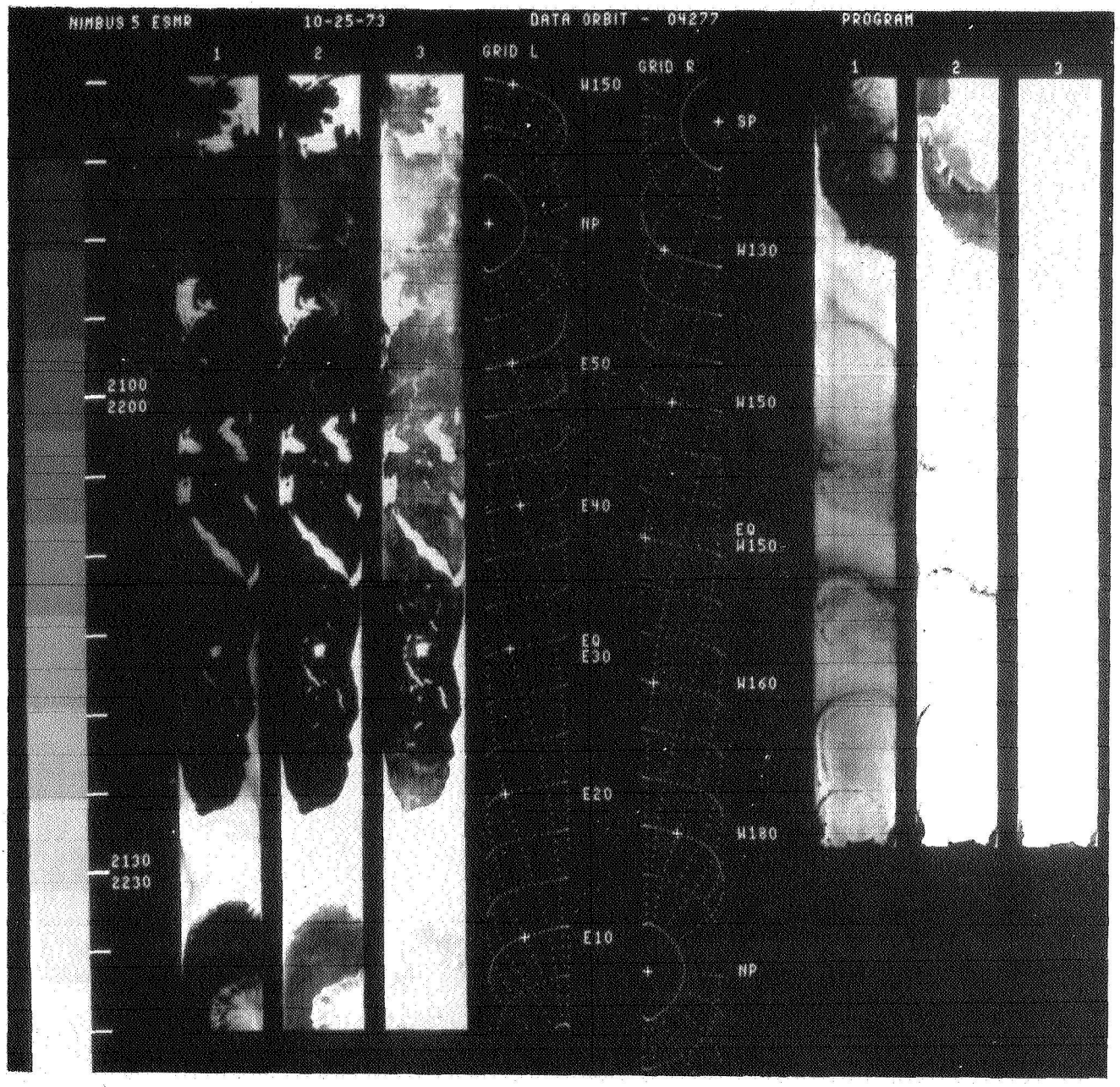

NIMBUS 5 ESMR
10-20-73
DATA ORBIT - 04201
PROGRAM
1
2
3
GRID L
GRID R
W90
EQ
E80
EQ
W90
E80
W100
E60
W120
NP
SP
W100
E110
W110
E90
EQ
W120
0530
0630
0600
0700

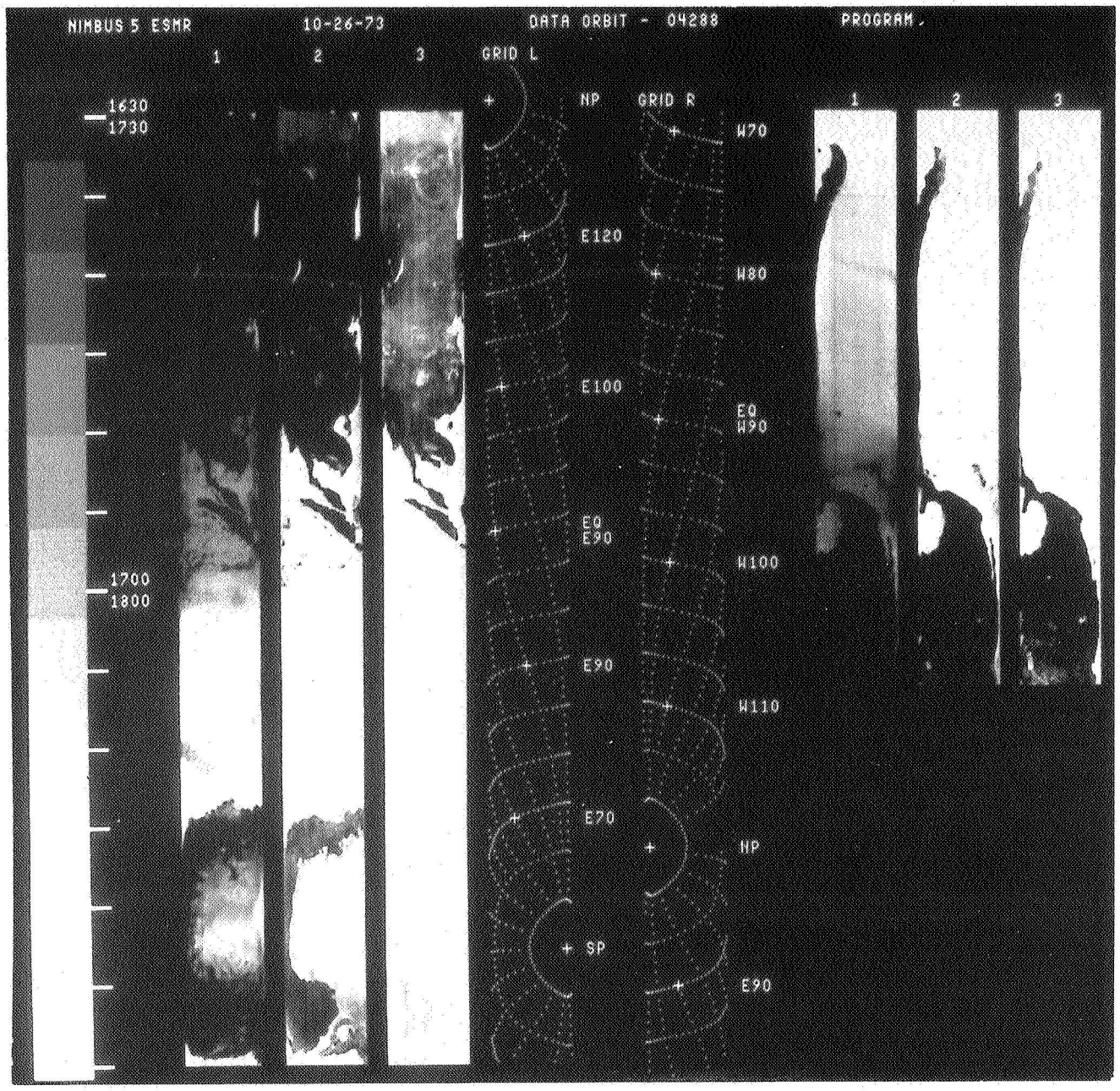

NIMBUS 5 ESMR
10-21-72
DATA ORBIT - 04221
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
NP
W70
E110
W90
1700
1800
E100
EQ
W80
EQ
E90
W100
E80
W120
E70
NP
1730
1830
SP
E90

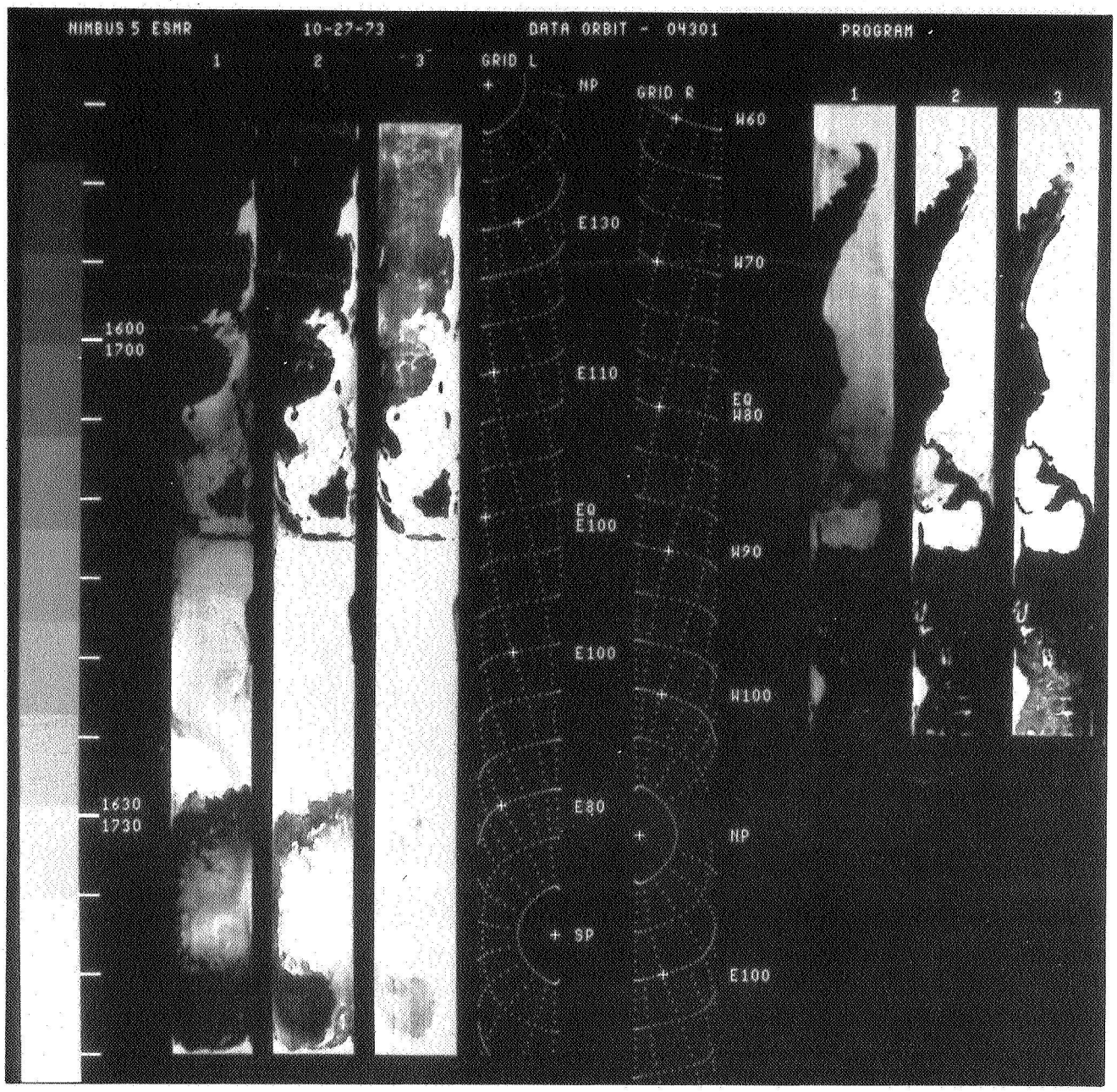

NIMBUS 5 ESMR
10-22-73
DATA ORBIT - 04231
PROGRAM
1
2
3
GRID L
W160
GRID R
E10
W170
E0
E00
1100
1200
E0
W180
W10
E170
W20
E160
NP
SP
1130
1230
W100
E20
E160

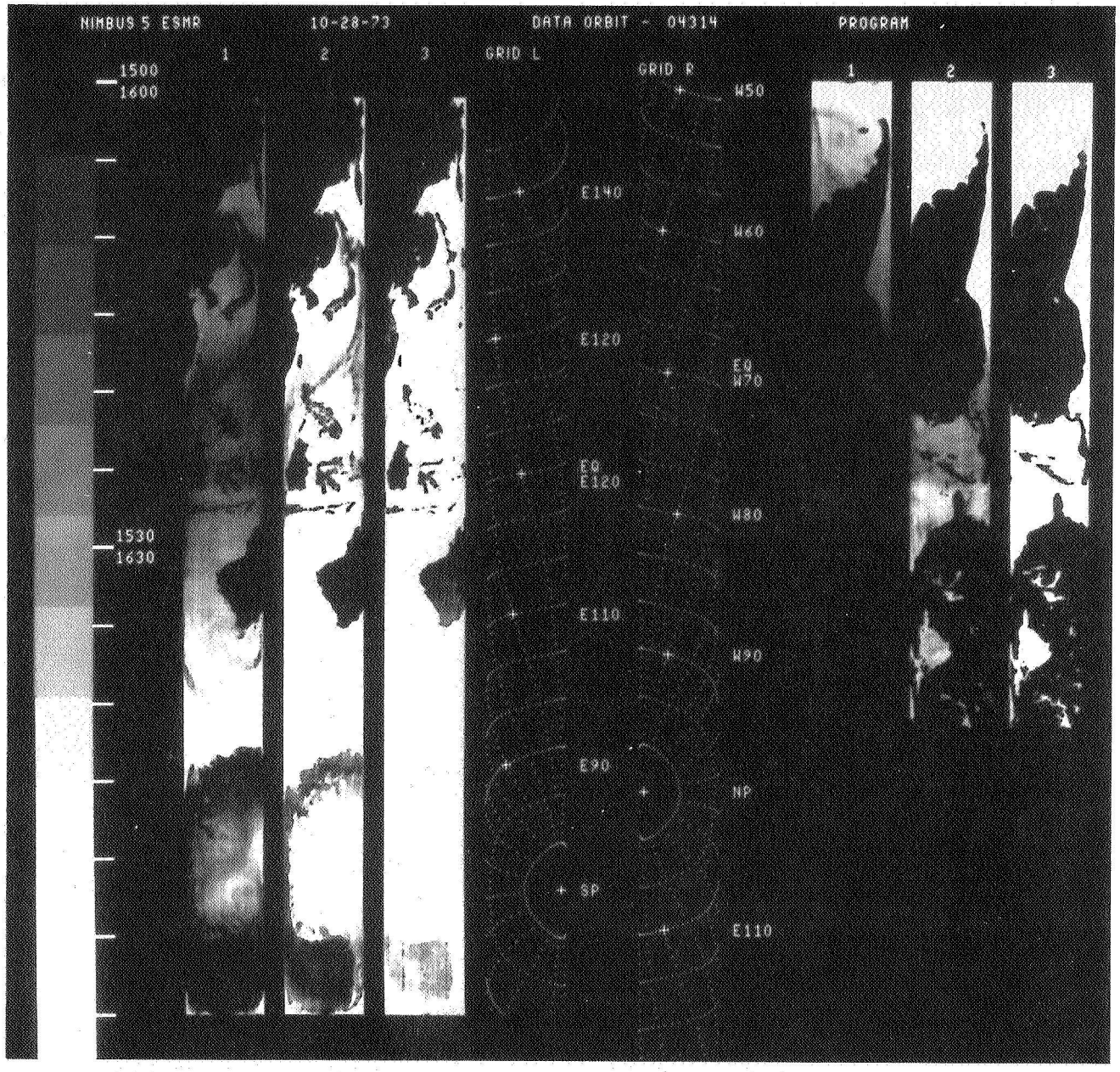

NIMBUS 5 ESMR
10-23-73
DATA ORBIT - 04248
PROGRAM
1
2
3
GRID L
GRID R
1700
1800
1730
1830
NP
W80
E110
W90
E90
EQ
W100
EQ
E90
W110
E80
W120
E60
NP
SP
E80

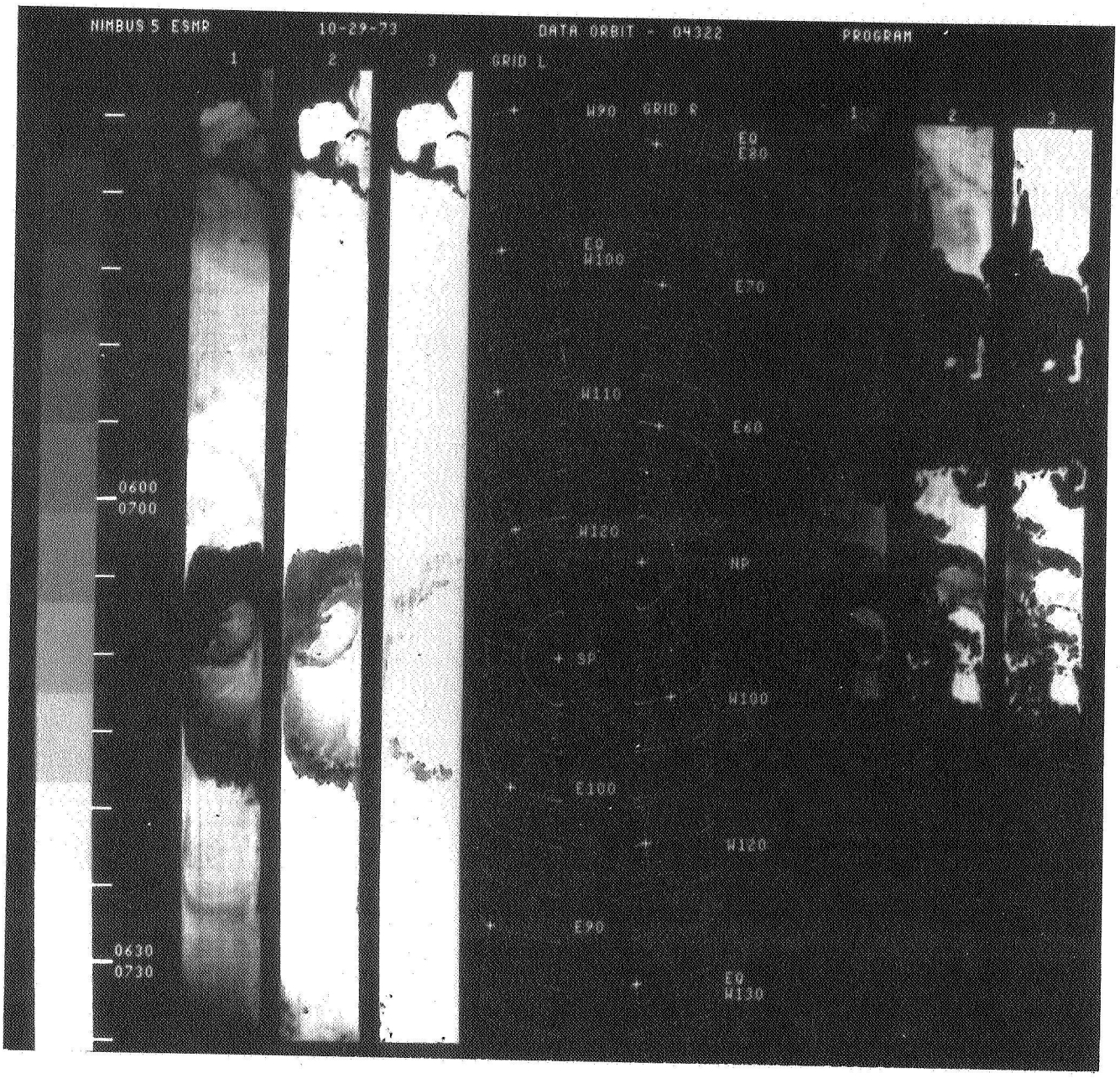

NIMBUS 5 ESMR
10-24-73
DATA ORBIT - 04259
PROGRAM
1
2
3
GRID L
GRID R
1300
1400
1330
1430
E170
W20
E160
EQ
W30
EQ
E150
W40
E140
W50
E130
NP
SP
E150
W10
E130

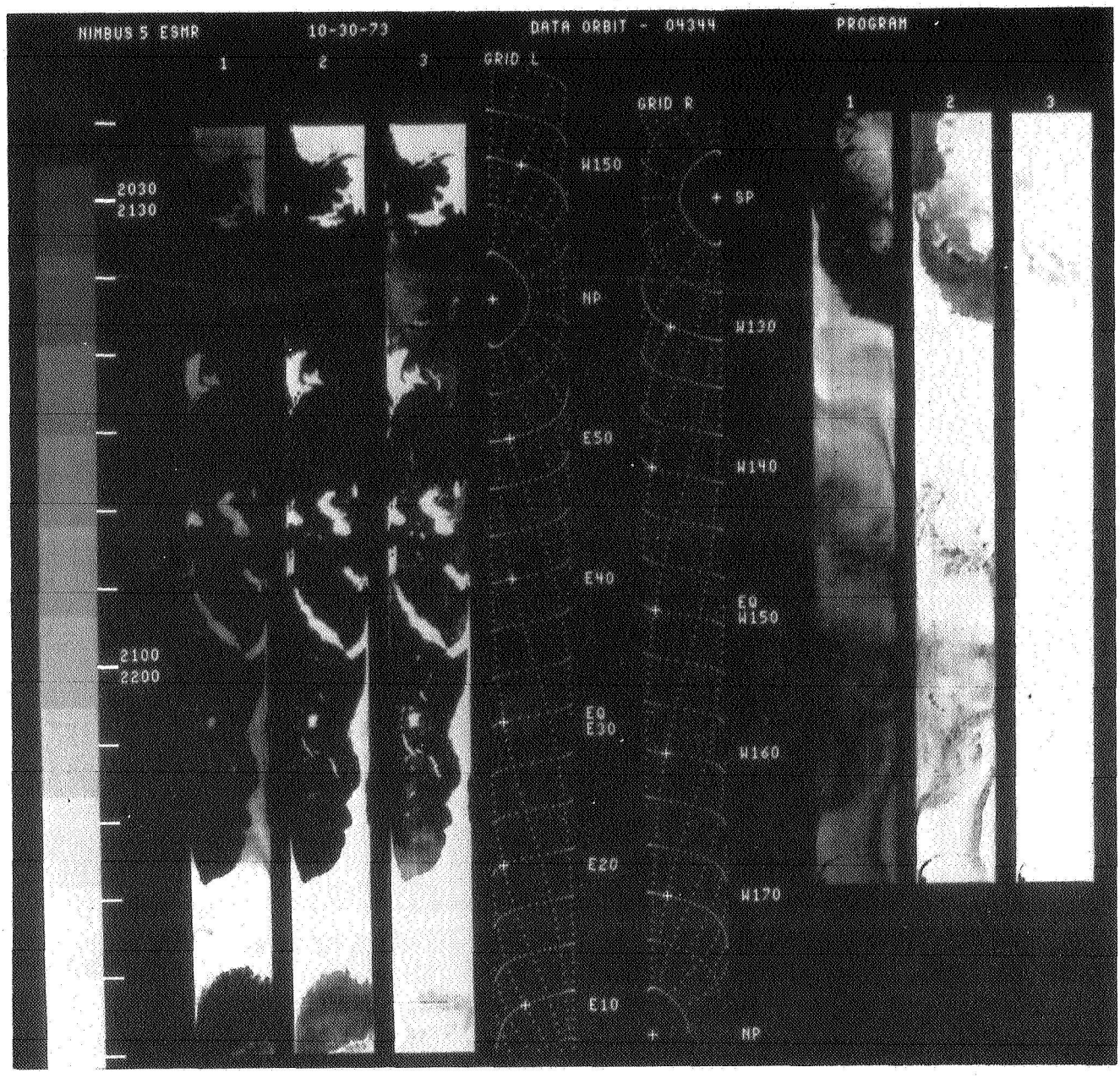

NIMBUS 5 ESMR
10-25-73
DATA ORBIT - 04277
PROGRAM
1
2
3
GRID L
GRID R
W150
SP
NP
W130
E50
W150
E40
EQ
W150
EQ
E30
W160
E20
W180
E10
NP
2100
2200
2130
2230

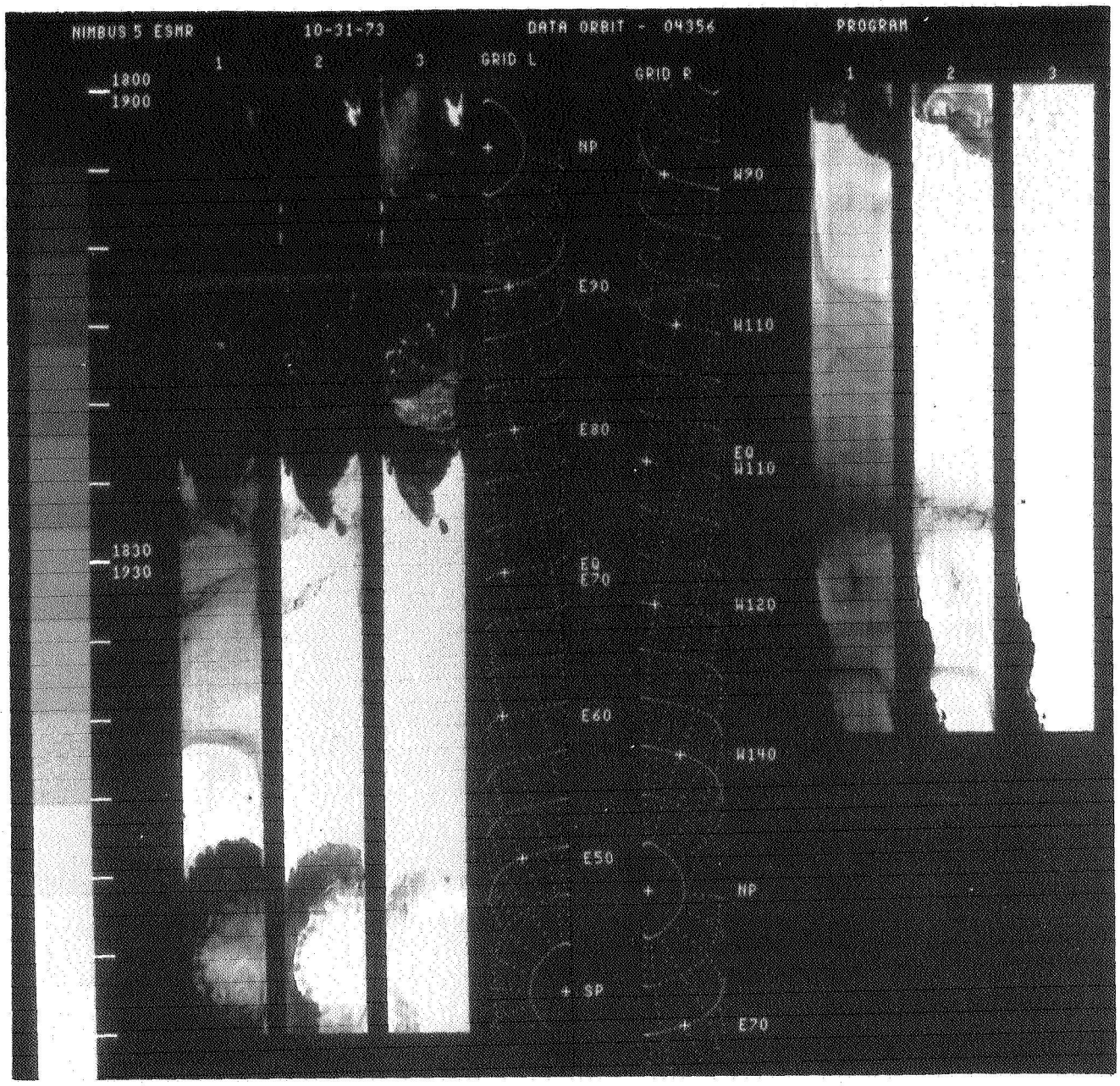

NIMBUS 5 ESMR
10-26-73
DATA ORBIT - 04288
PROGRAM .
1
2
3
GRID L
1630
1730
1700
1800
NP
E120
E100
EQ
E90
E90
E70
SP
GRID R
W70
W80
EQ
W90
W100
W110
HP
E90
1
2
3

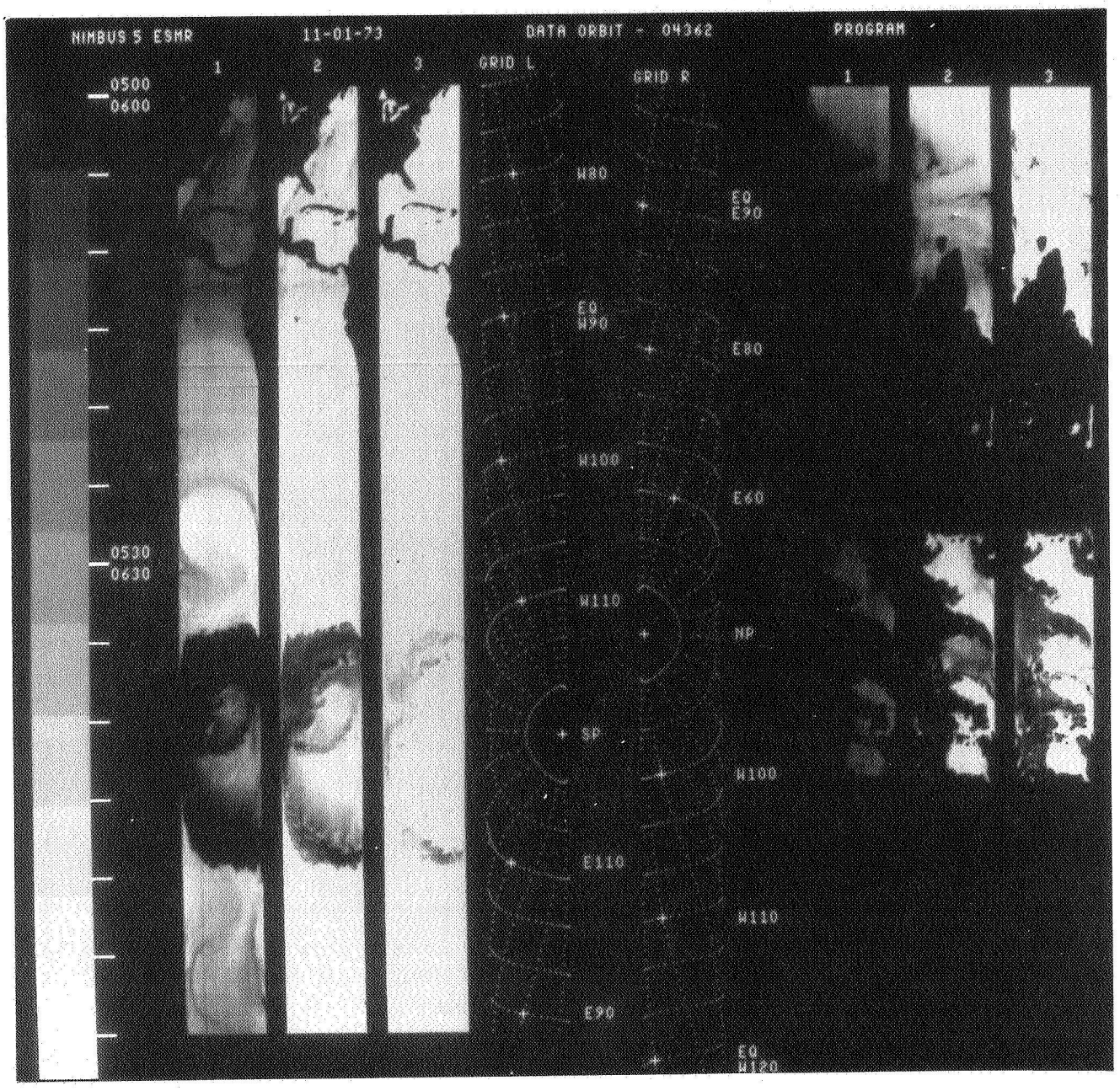

NIMBUS 5 ESMR
10-27-73
DATA ORBIT - 04301
PROGRAM -
1
2
3
GRID L
NP
GRID R
W60
E130
W70
E110
EQ
W80
EQ
E100
W90
E100
W100
E80
NP
SP
E100
1400
1700
1630
1730

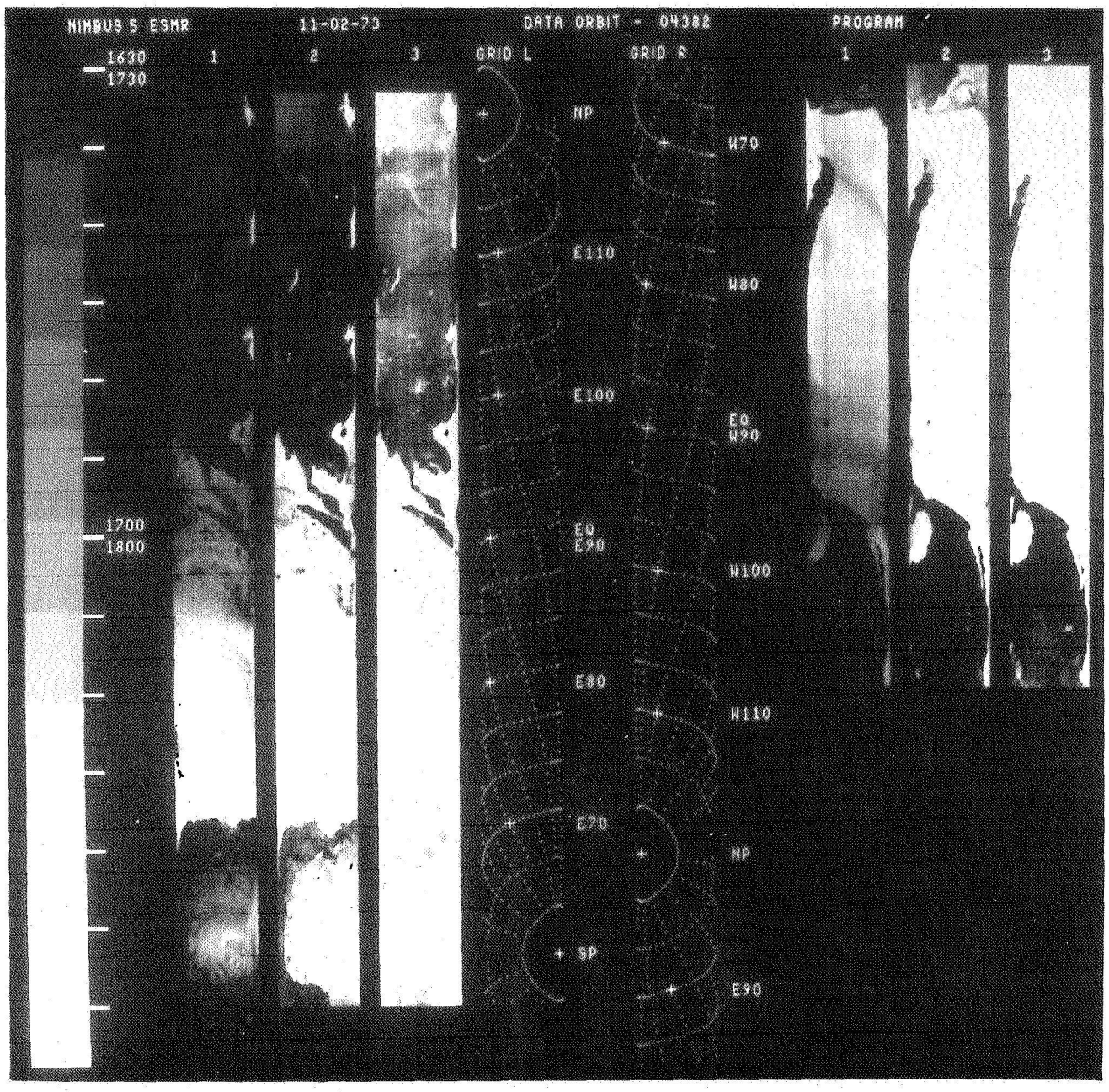

NIMBUS 5 ESMR
10-28-73
DATA ORBIT - 04314
PROGRAM
1
2
3
GRID L
GRID R
1500
1600
1530
1630
W50
E140
W60
E120
EQ
W70
EQ
E120
W80
E110
W90
E90
NP
SP
E110

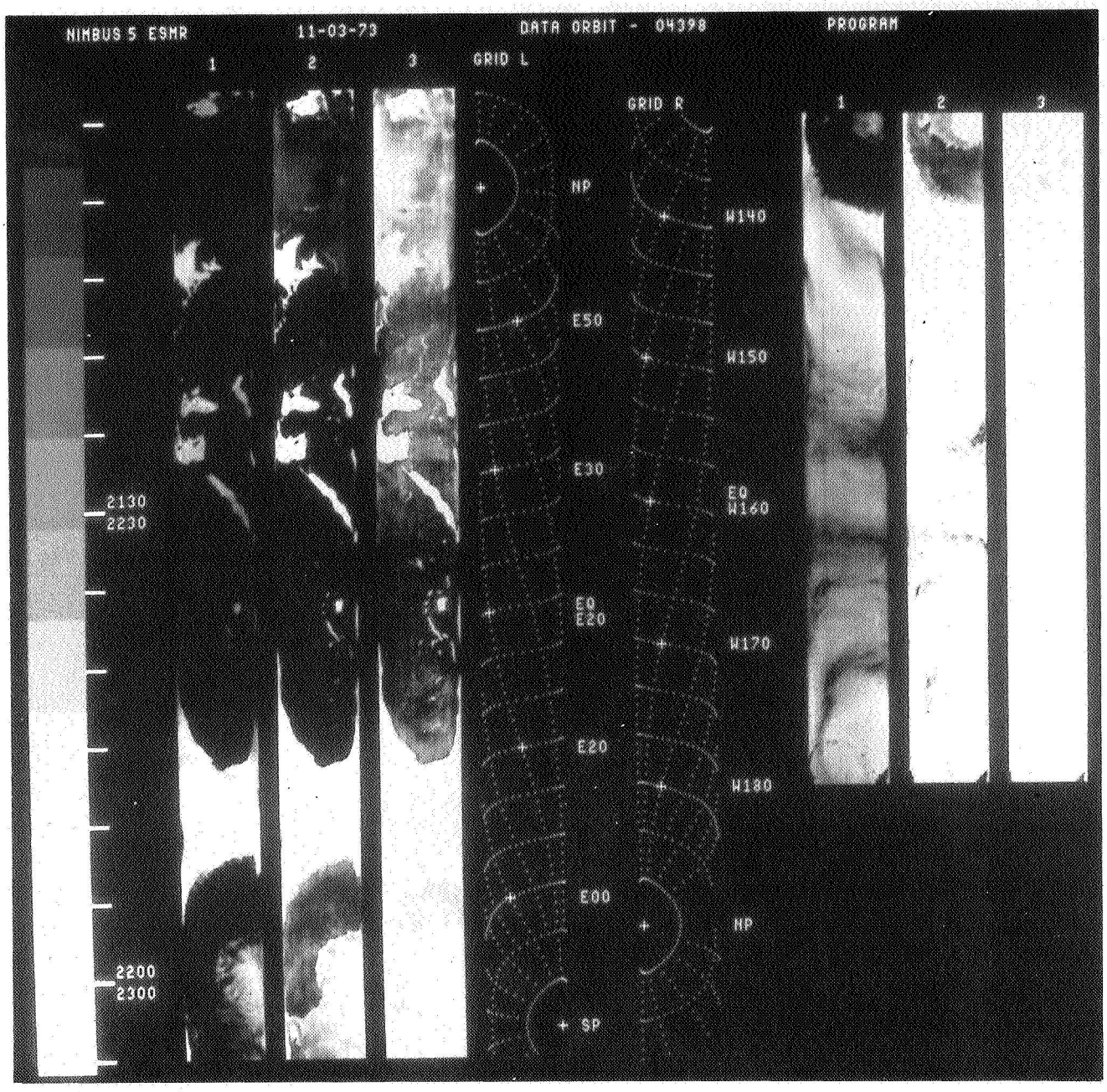

NIMBUS 5 ESMR
10-22-73
DATA ORBIT - 04322
PROGRAM
1
2
3
GRID L
GRID R
W90
EQ
E30
EQ
W100
E70
W110
E40
0600
0700
W120
NP
SP
W100
E100
W120
E90
0630
0730
EQ
W130

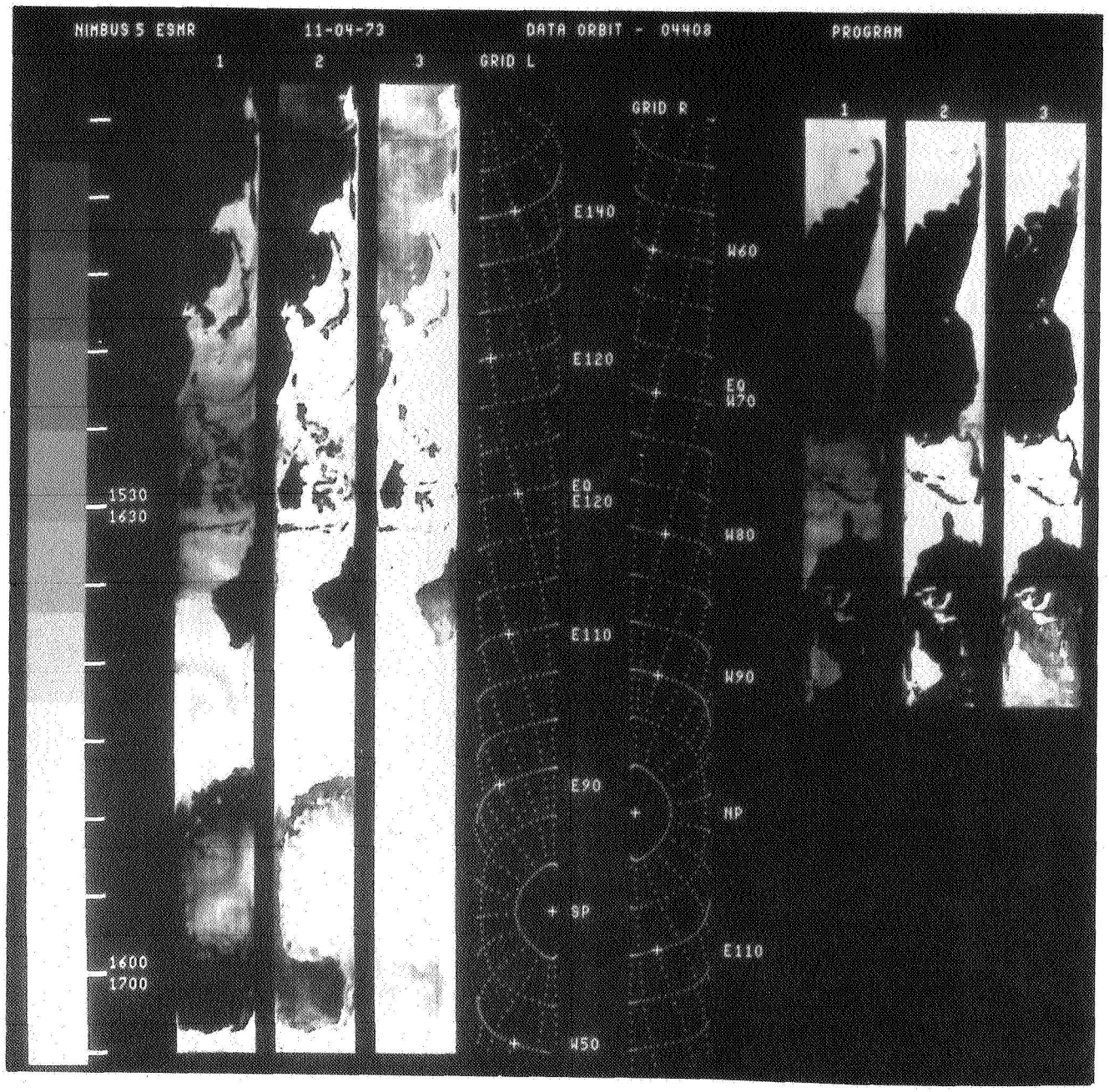

NIMBUS 5 ESMR
10-30-73
DATA ORBIT - 04344
PROGRAM -
1
2
3
GRID L
GRID R
1
2
3
2030
2130
2100
2200
W150
SP
NP
W130
E50
W140
E40
EQ
W150
EQ
E30
W160
E20
W170
E10
NP

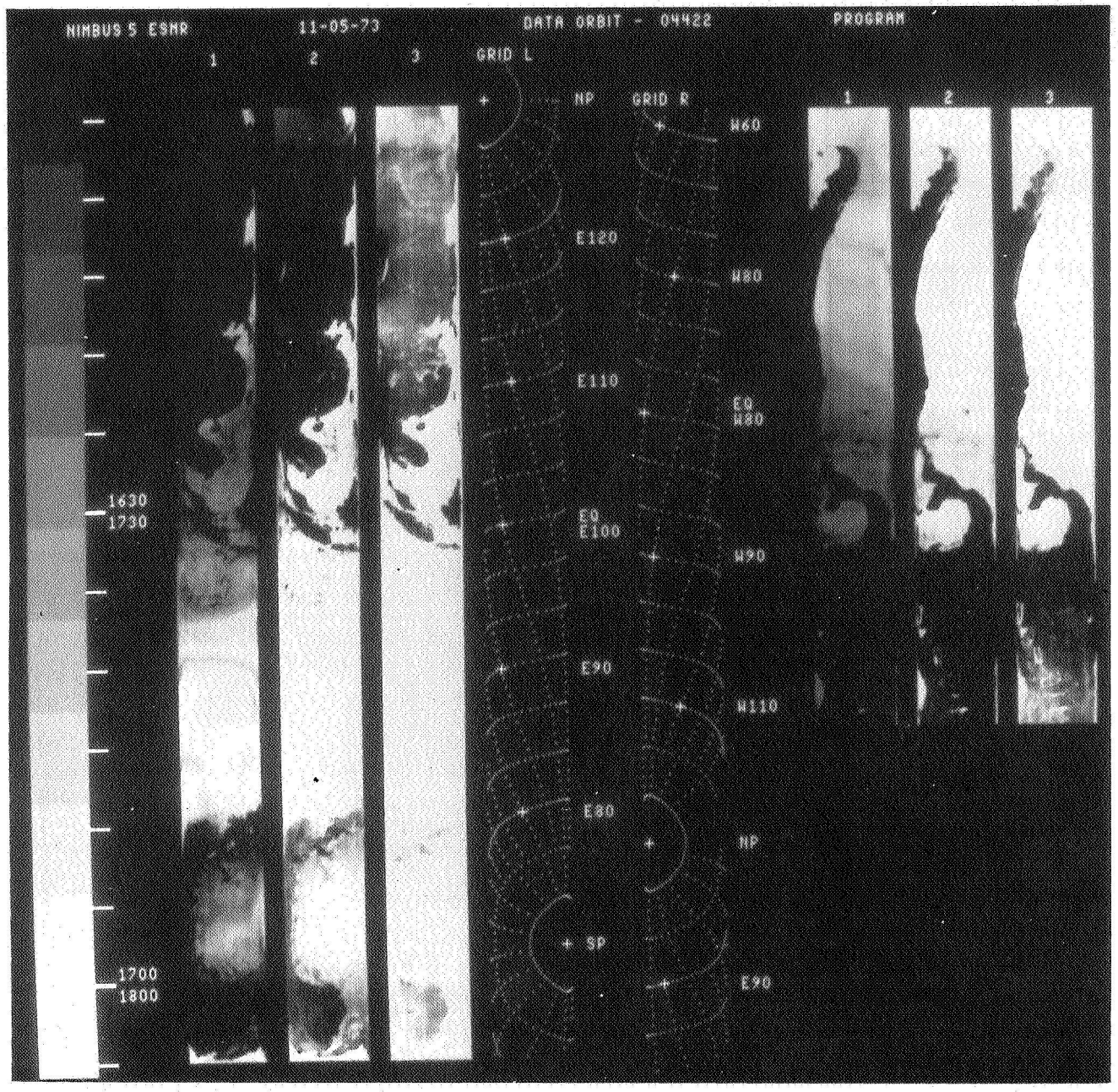

NIMBUS 5 ESMR
10-31-73
DATA ORBIT - 04356
PROGRAM
GRID L
GRID R
1
2
3
1800
1900
1830
1930
NP
W90
E90
W110
E80
E0
W110
E0
E70
W120
E60
W140
E50
NP
SP
E70

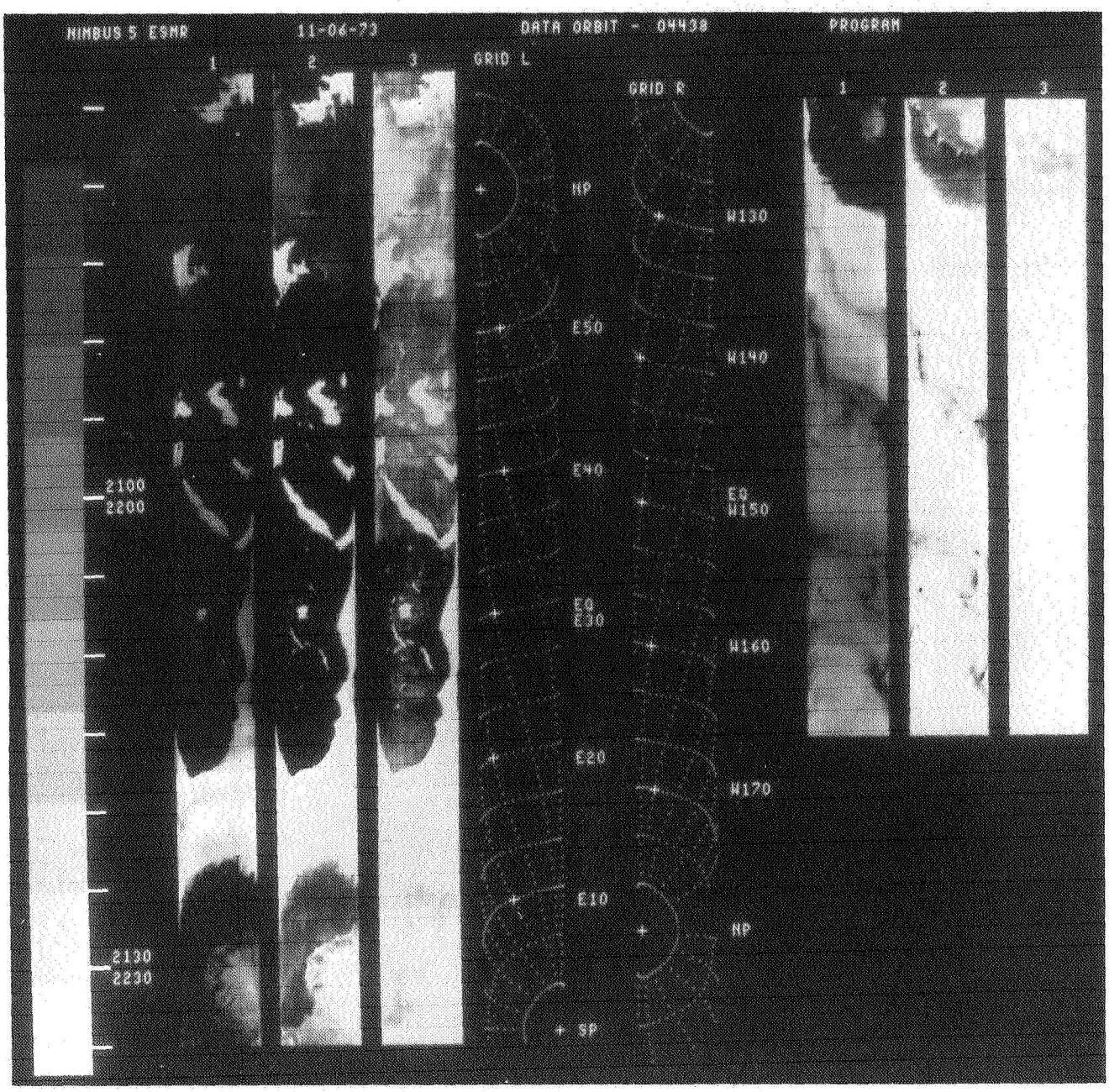

NIMBUS 5 ESMR
11-01-73
DATA ORBIT - 04362
PROGRAM
1
2
3
GRID L
GRID R
0500
0600
0530
0630
W80
EQ
E90
EQ
W90
E80
W100
E60
W110
NP
SP
W100
E110
W110
E90
EQ
W120

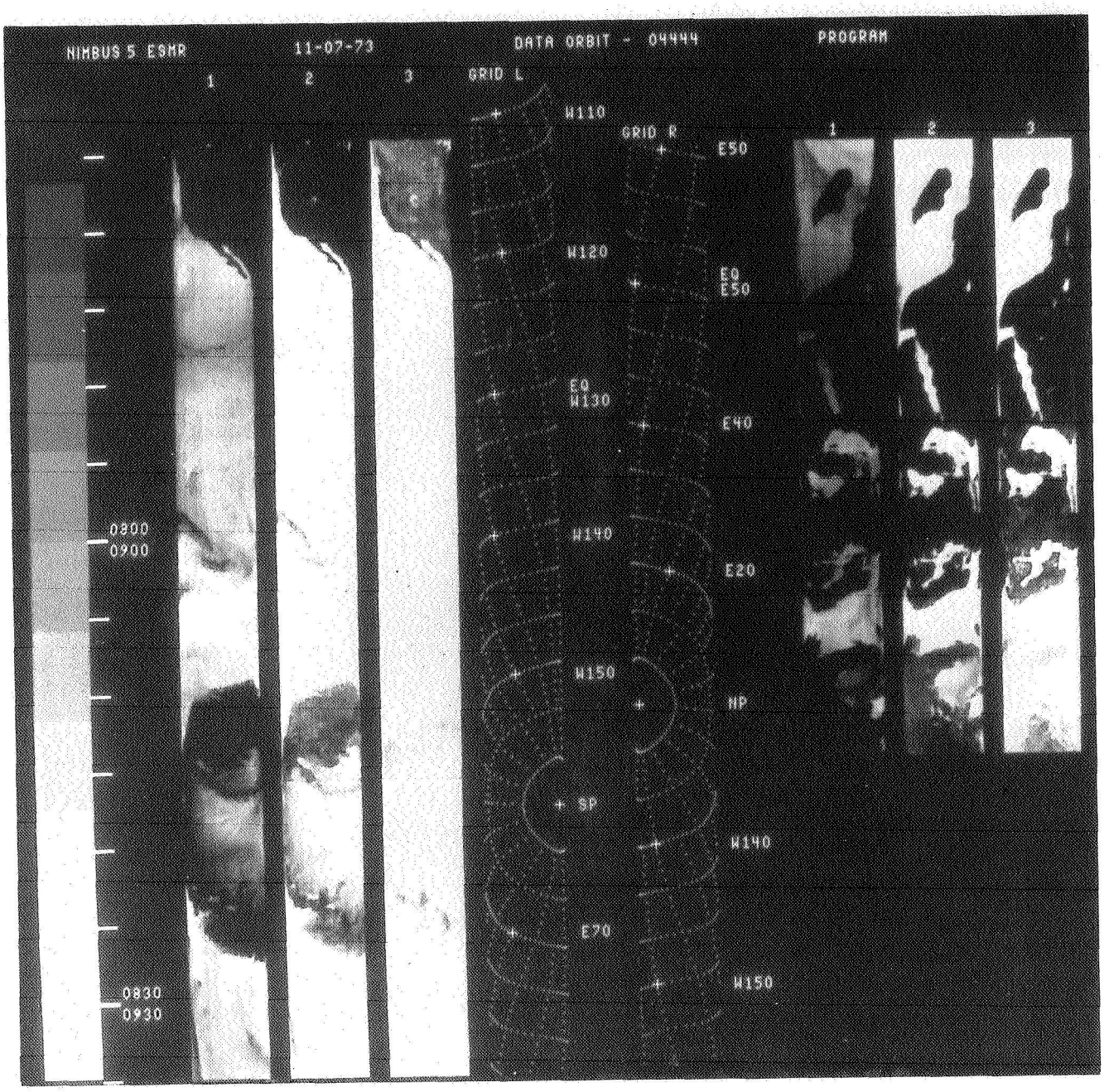

NIMBUS 5 ESMR
11-02-73
DATA ORBIT - 04382
PROGRAM
1
2
3
1630
1730
1700
1800
GRID L
GRID R
NP
W70
E110
W80
E100
EQ
W90
EQ
E90
W100
E80
W110
E70
NP
SP
E90

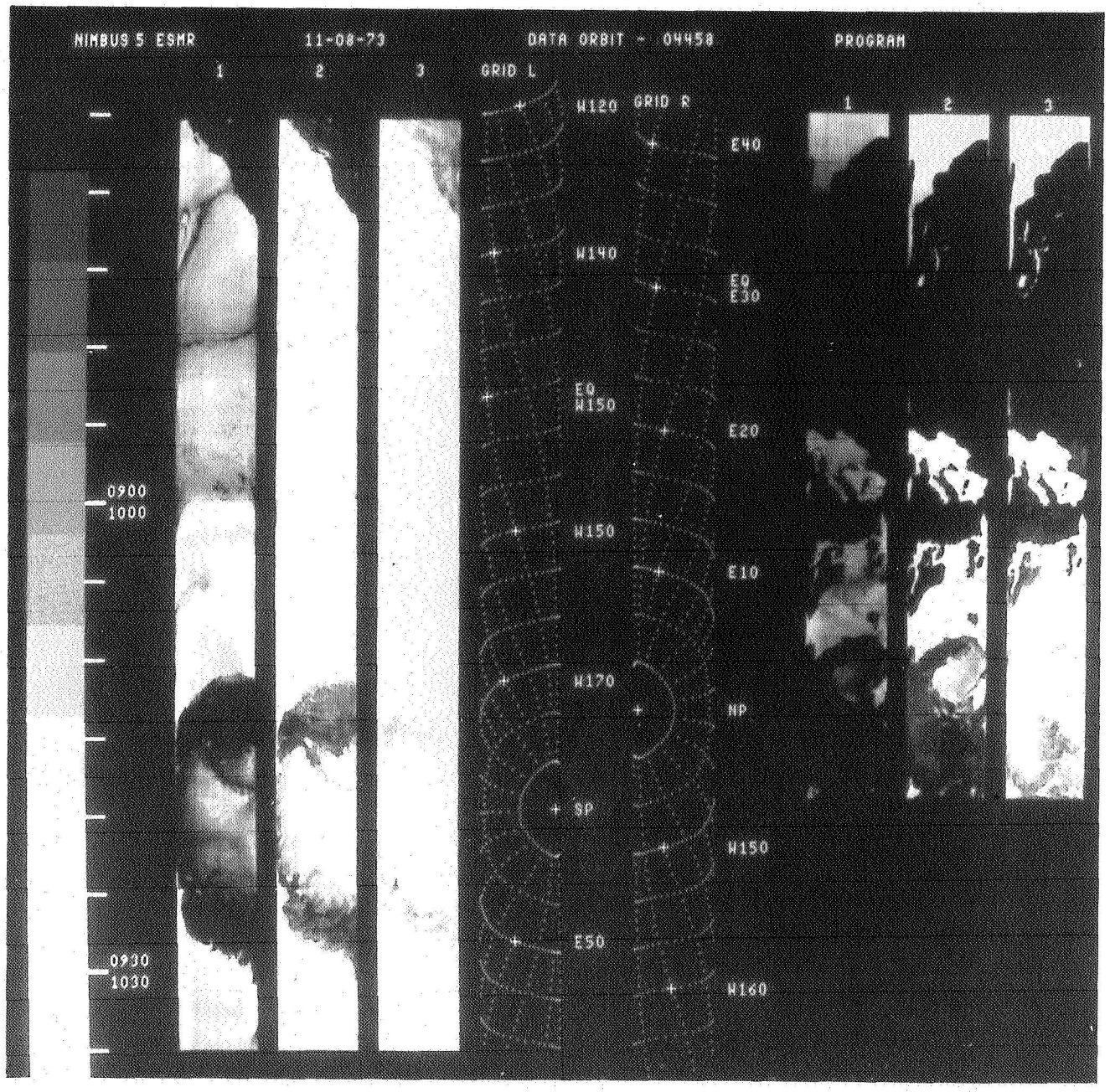

NIMBUS 5 ESMR
11-03-73
DATA ORBIT - 04398
PROGRAM
1
2
3
GRID L
GRID R
NP
E50
E30
EQ
E20
E00
SP
W140
W150
EQ
W160
W170
W180
NP
2130
2230
2200
2300

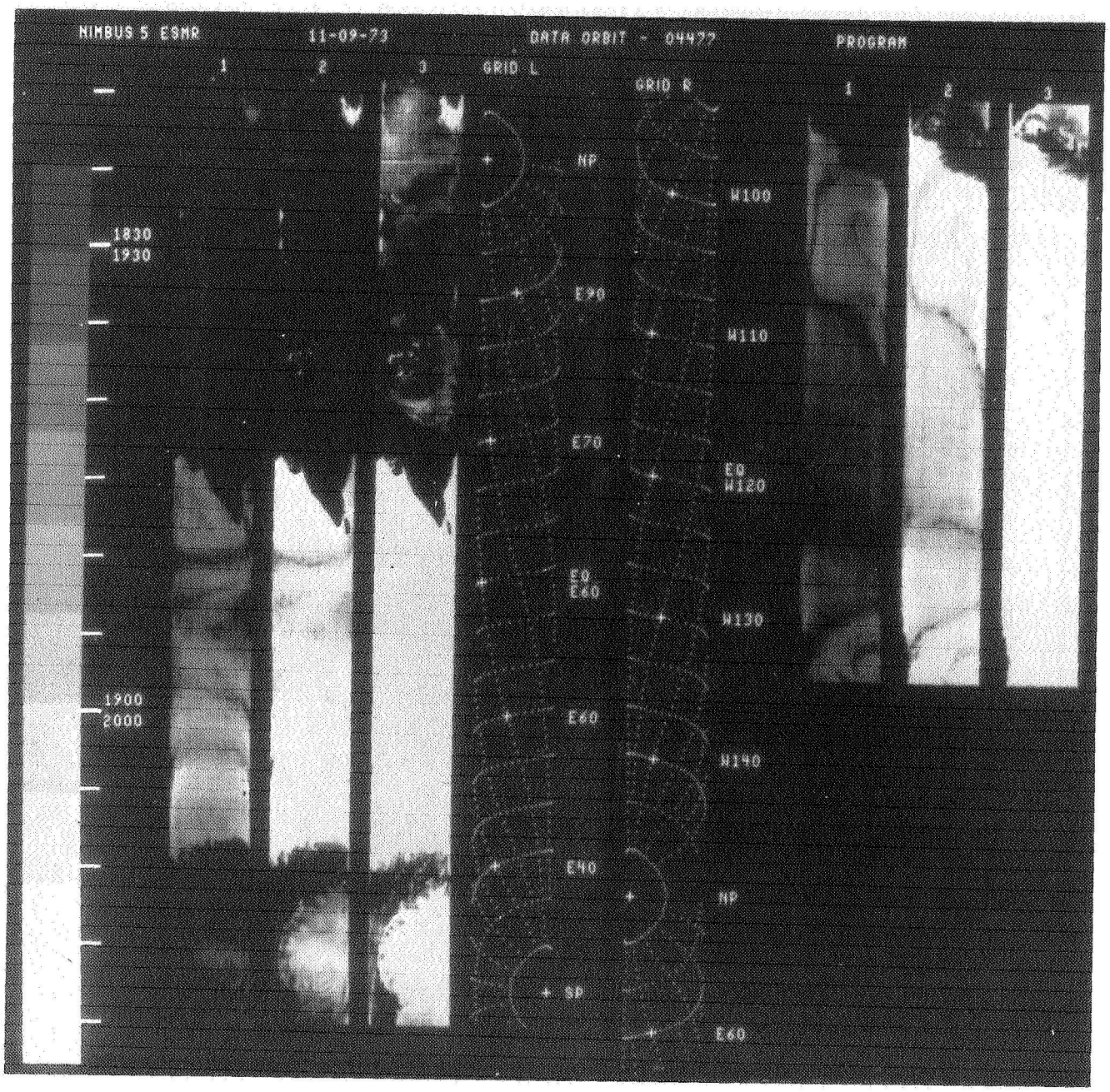

NIMBUS 5 ESMR
11-04-73
DATA ORBIT - 04408
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E140
W60
E120
EQ
W70
EQ
E120
W80
E110
W90
E90
NP
SP
E110
W50
1530
1630
1600
1700

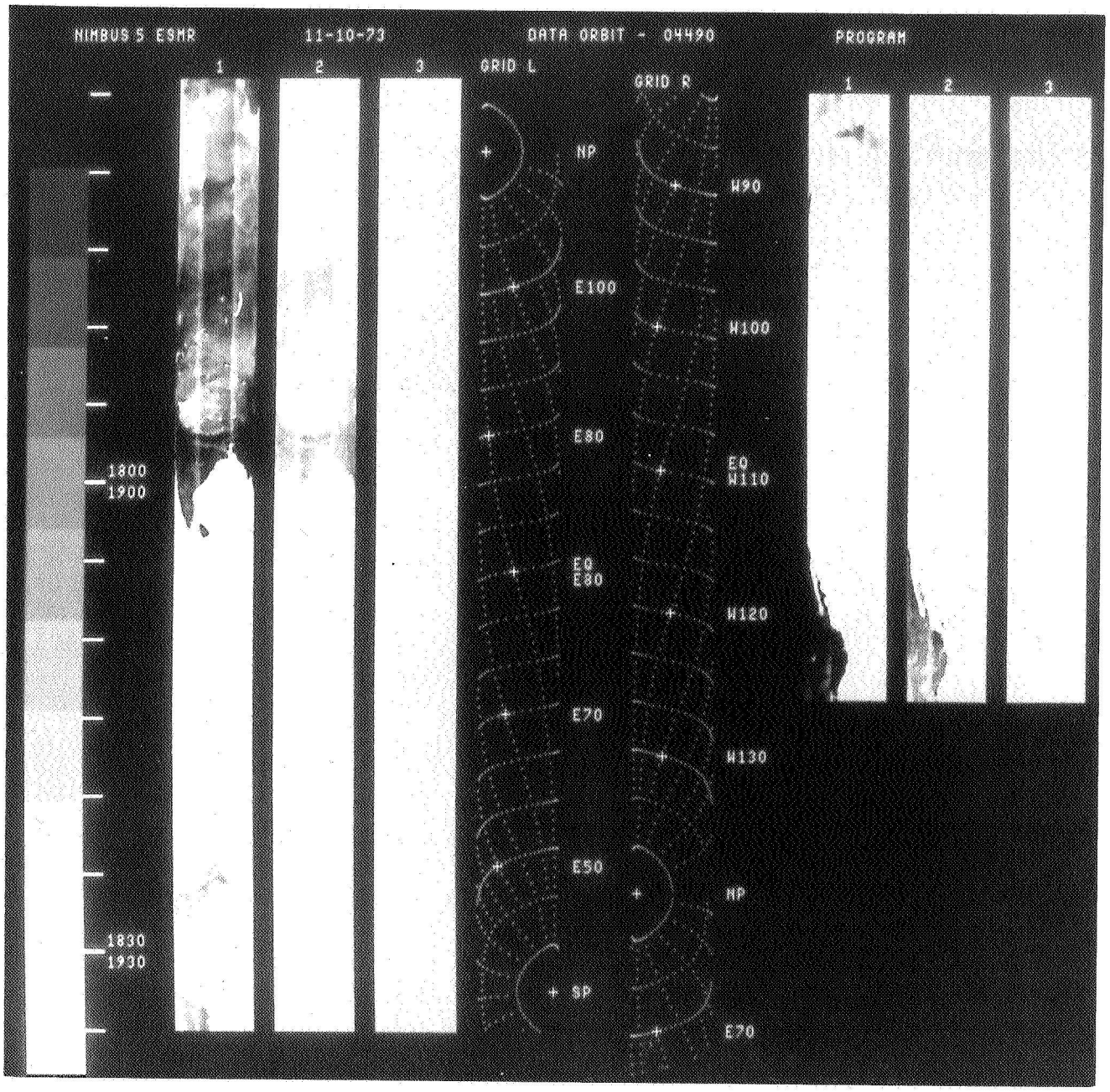

NIMBUS 5 ESMR
11-05-73
DATA ORBIT - 04422
PROGRAM
1
2
3
GRID L
GRID R
NP
W60
E120
W80
E110
EQ
W80
EQ
E100
W90
E90
W110
E80
NP
SP
E90
1630
1730
1700
1800

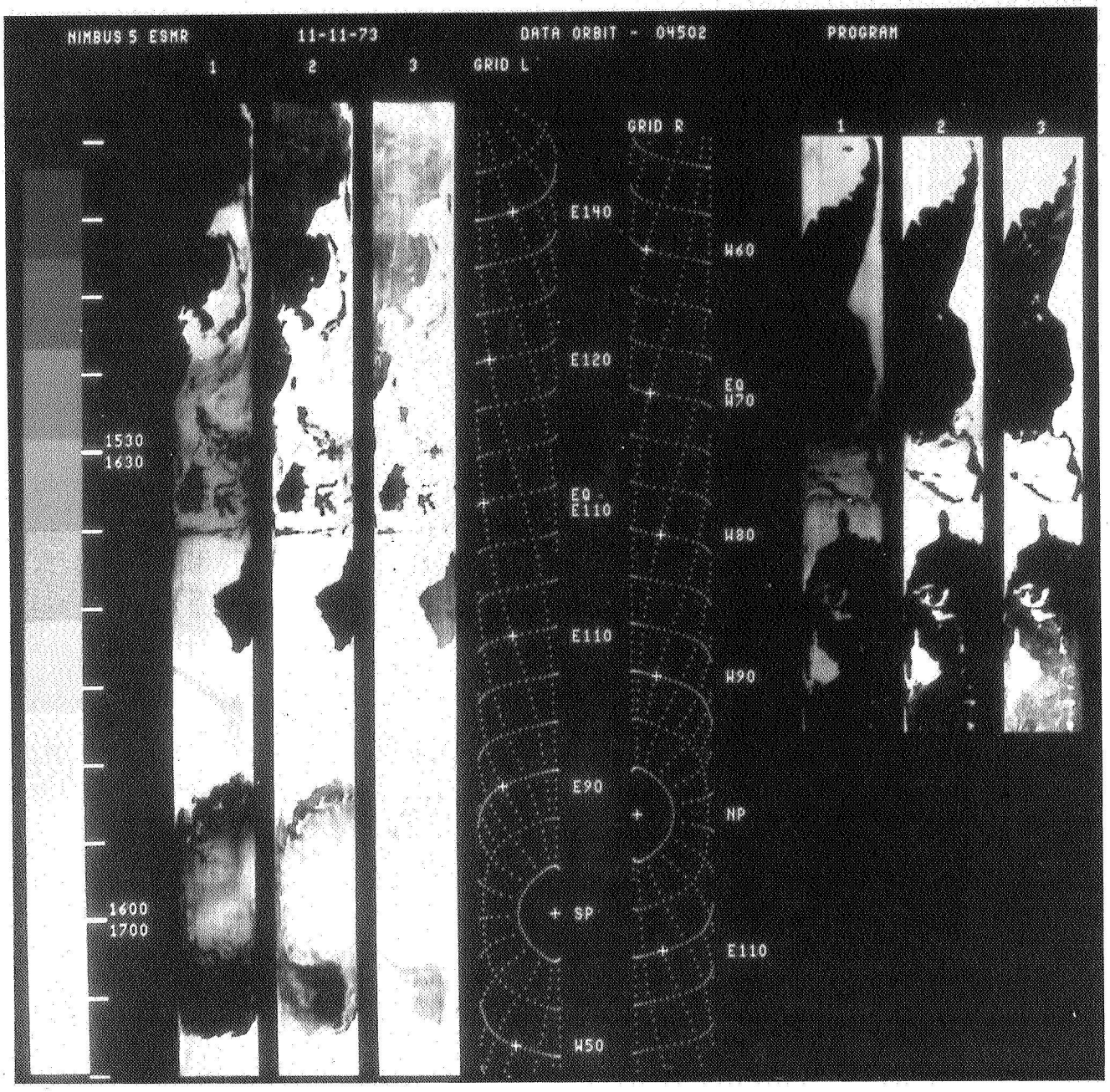

NIMBUS 5 ESMR
11-06-73
DATA ORBIT - 04438
PROGRAM
1
2
3
GRID L
GRID R
NP
W130
E50
W140
E40
EQ
W150
EQ
E30
W160
E20
W170
E10
NP
SP
2100
2200
2130
2230

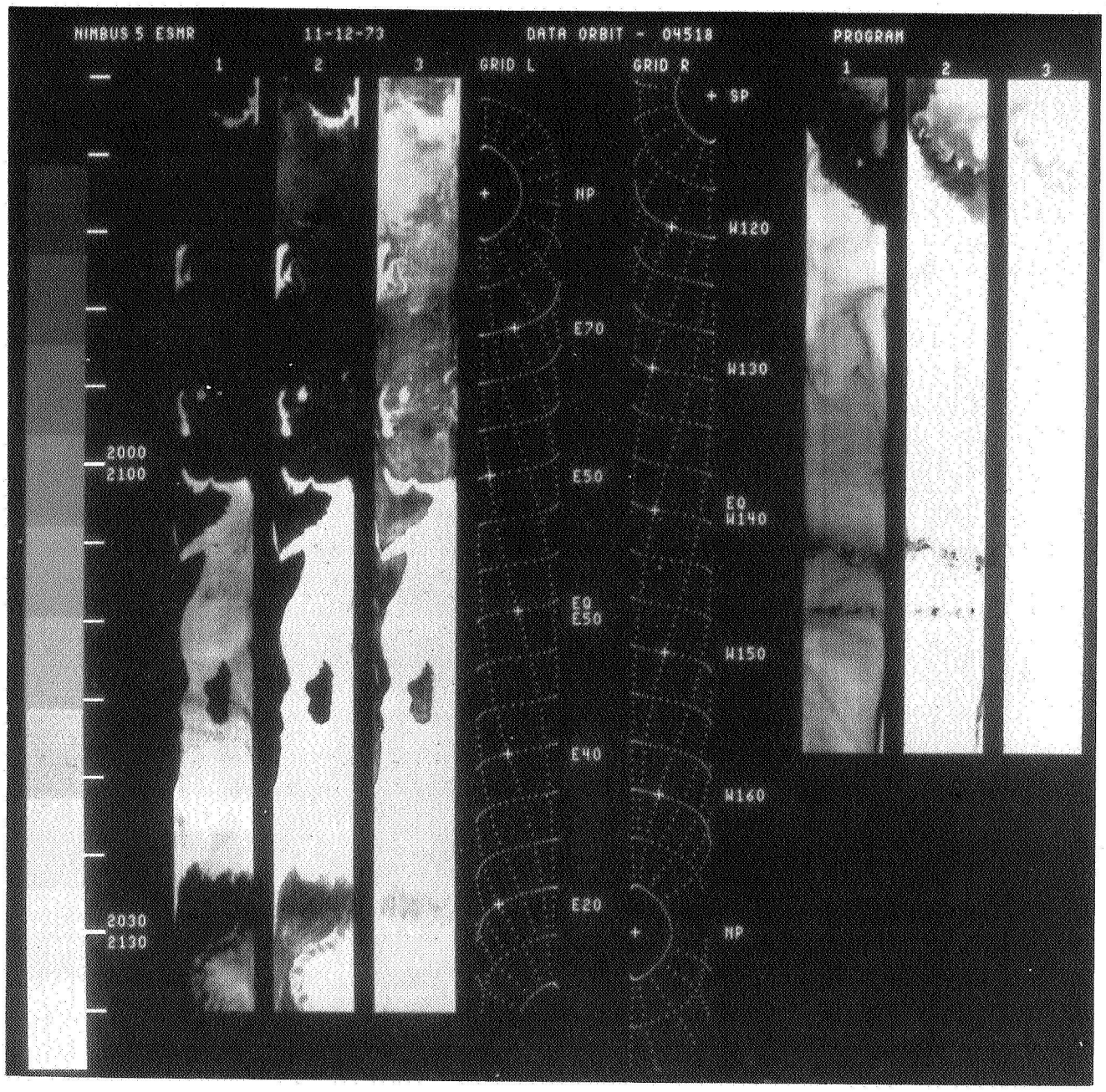

NIMBUS 5 ESMR
11-07-73
DATA ORBIT - 04444
PROGRAM
1
2
3
GRID L
W110
GRID R
E50
W120
EQ
E50
EQ
W130
E40
W140
E20
W150
NP
SP
W140
E70
W150
0800
0900
0830
0930

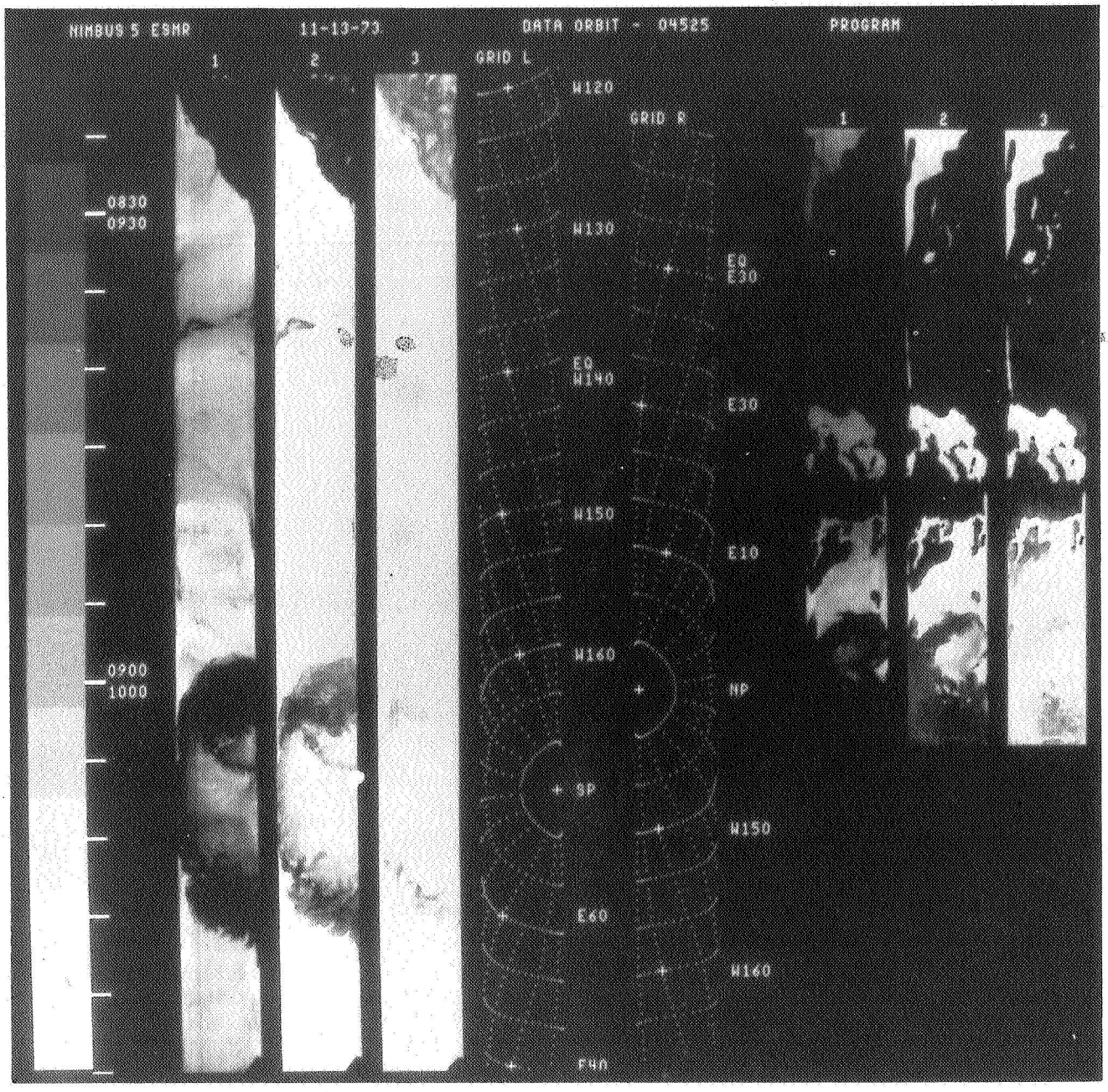

NIMBUS 5 ESMR
11-08-73
DATA ORBIT - 04458
PROGRAM
1
2
3
GRID L
GRID R
W120
E40
W140
EQ
E30
EQ
W150
E20
W150
E10
W170
NP
SP
W150
E50
W160
0900
1000
0930
1030

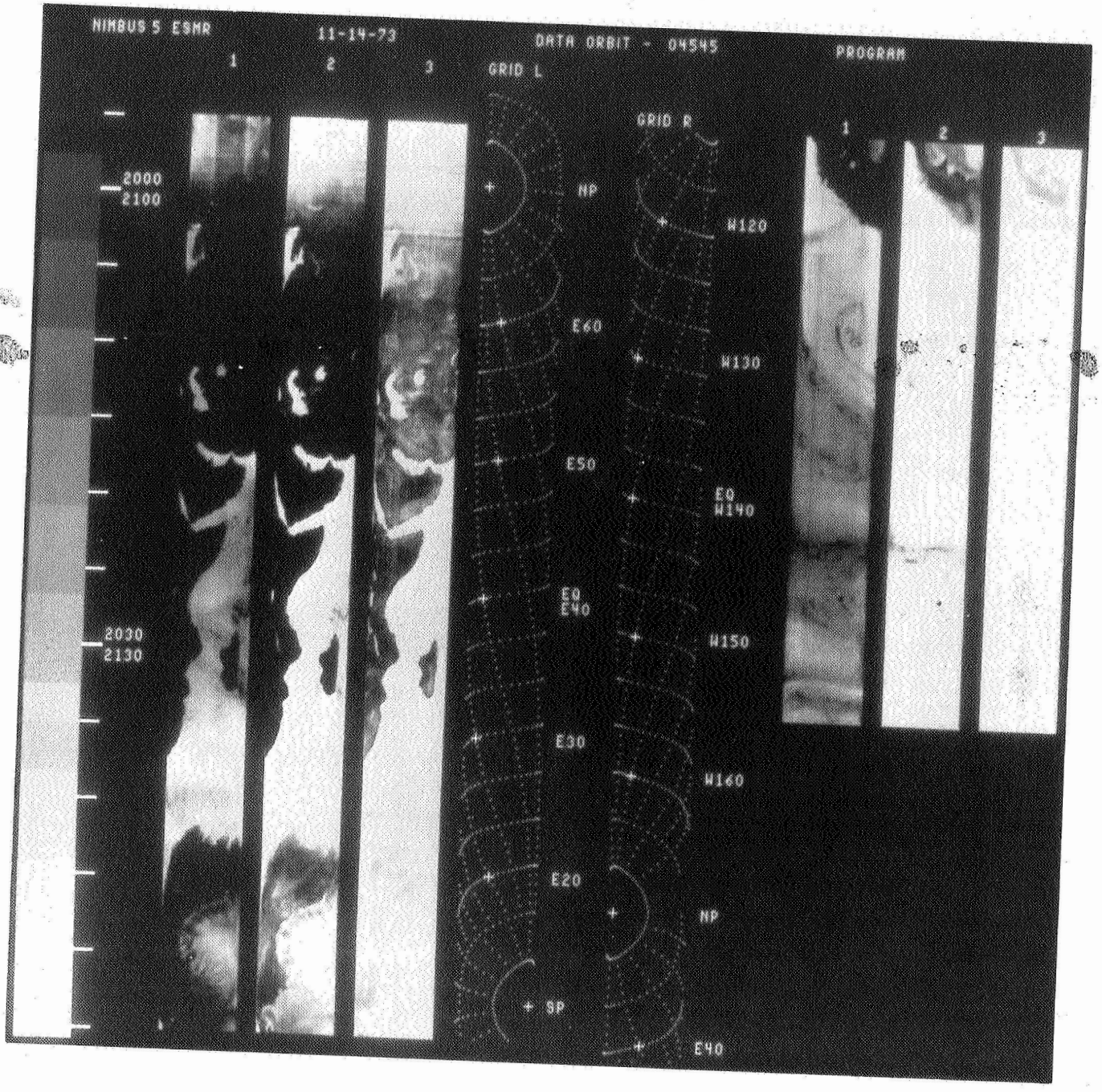

NIMBUS 5 ESMR
11-09-73
DATA ORBIT - 04477
PROGRAM
1
2
3
GRID L
GRID R
NP
W100
1830
1930
E90
W110
E70
EQ
W120
EQ
E60
W130
1900
2000
E60
W140
E40
NP
SP
E60

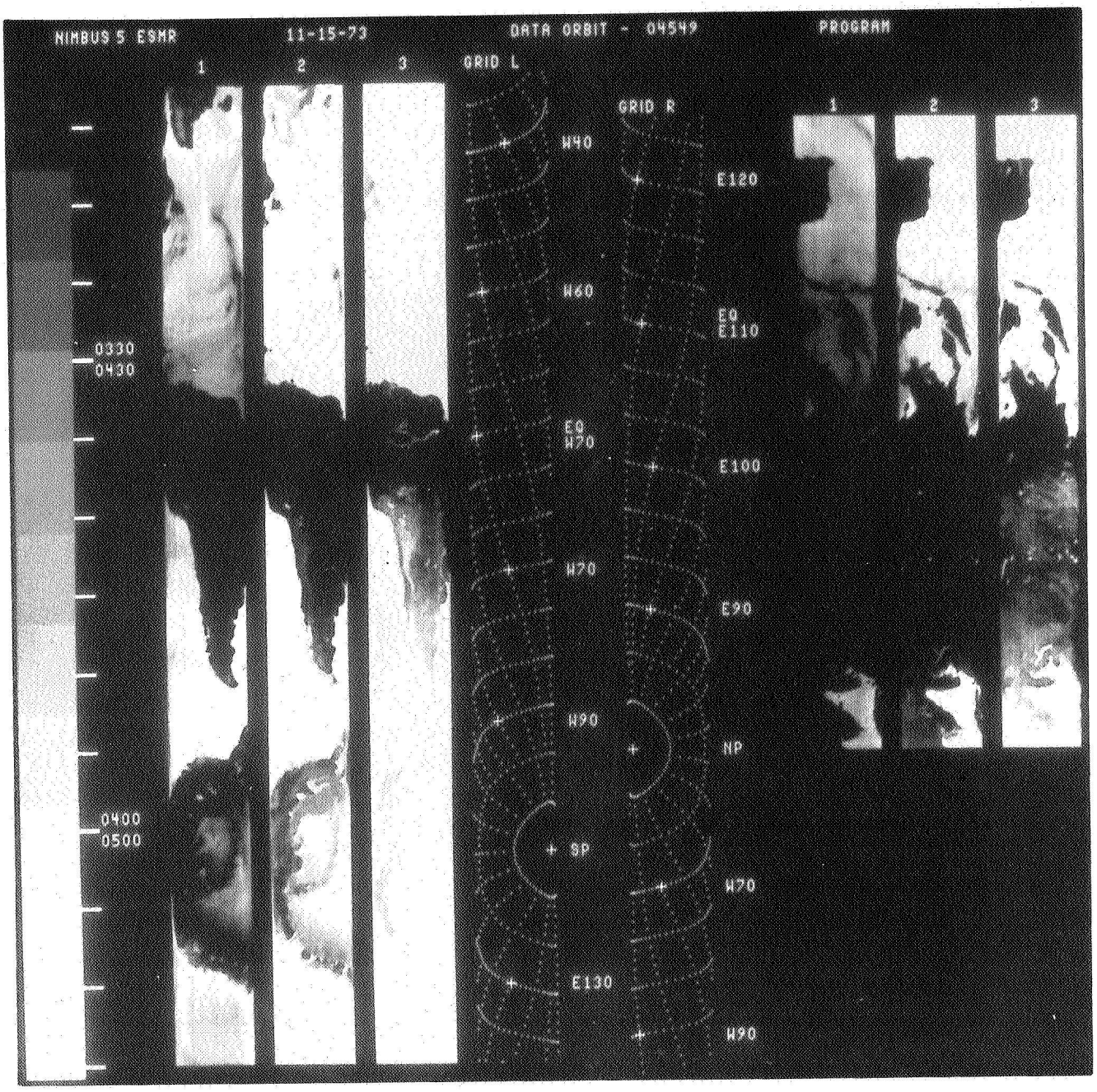

NIMBUS 5 ESMR
11-10-73
DATA ORBIT - 04490
PROGRAM
1
2
3
GRID L
GRID R
NP
W90
E100
W100
E80
EQ
W110
EQ
E80
W120
E70
W130
E50
NP
SP
E70
1800
1900
1830
1930

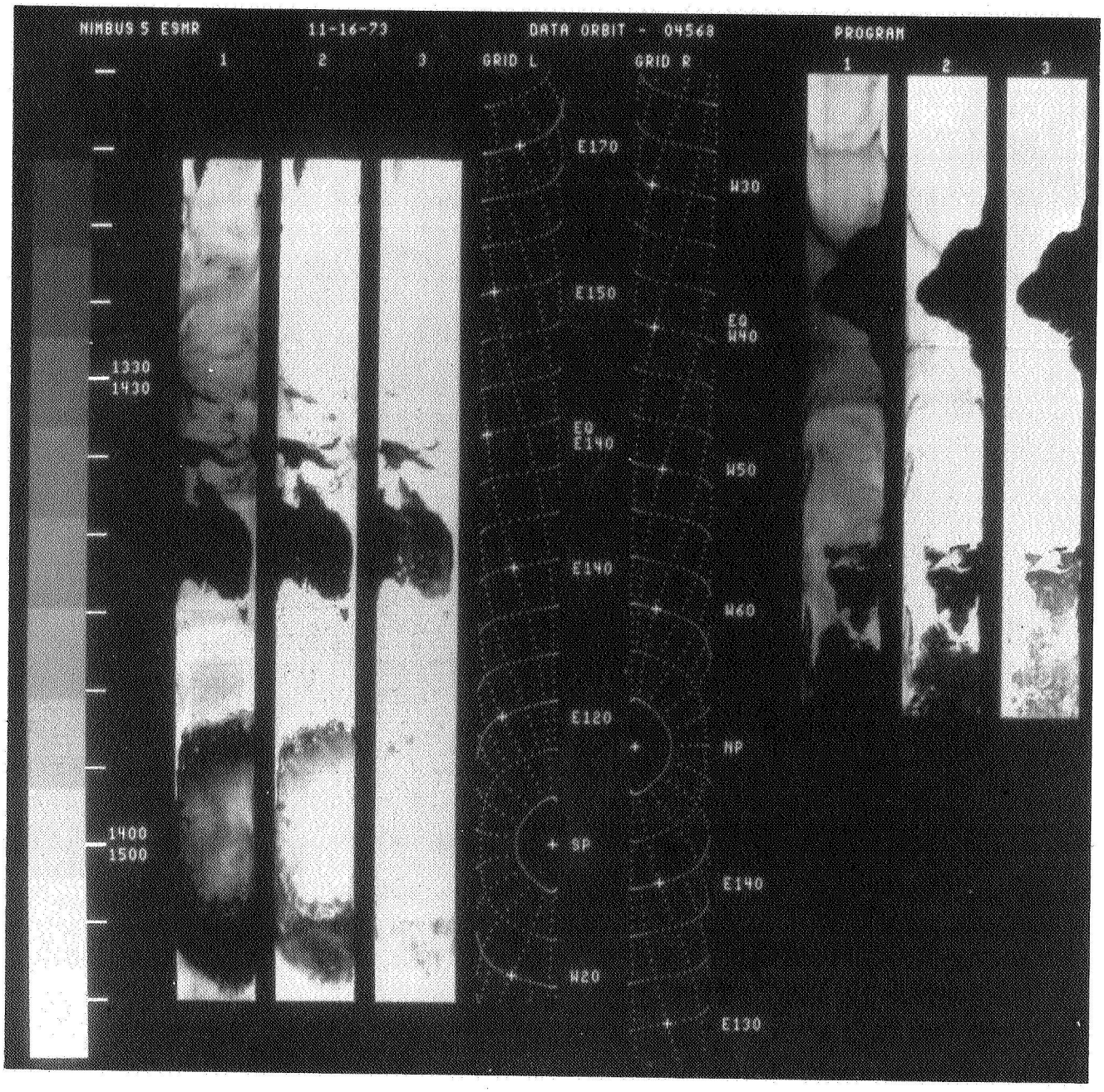

NIMBUS 5 ESMR
11-11-73
DATA ORBIT - 04502
PROGRAM
1
2
3
GRID L
GRID R
1530
1630
1600
1700
E140
W60
E120
EQ
W70
EQ
E110
W80
E110
W90
E90
NP
SP
E110
W50

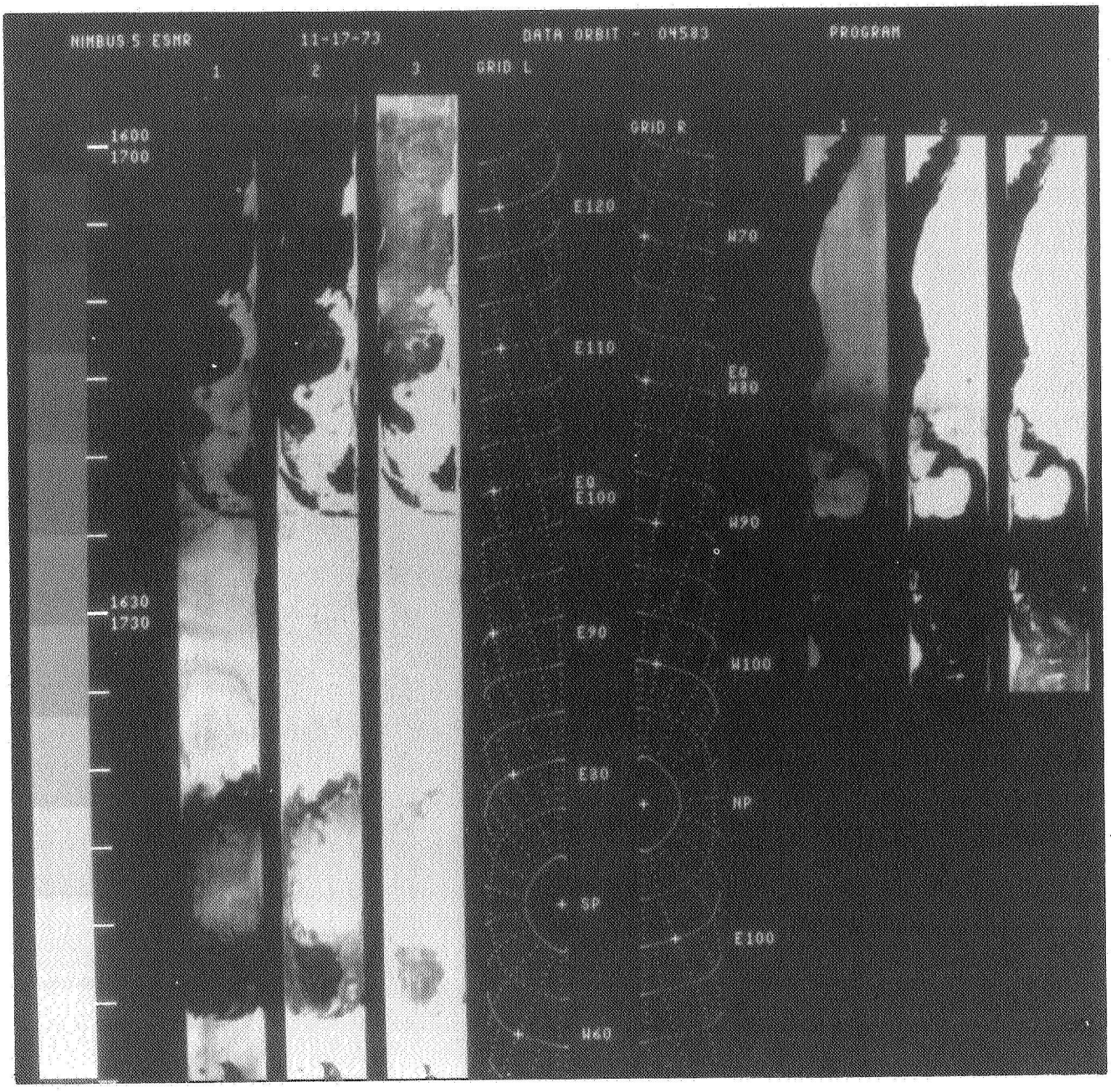

NIMBUS 5 ESMR
11-12-73
DATA ORBIT - 04518
PROGRAM
1
2
3
GRID L
GRID R
+ SP
NP
W120
E70
W130
2000
2100
E50
EQ
W140
EQ
E50
W150
E40
W160
E20
NP
2030
2130

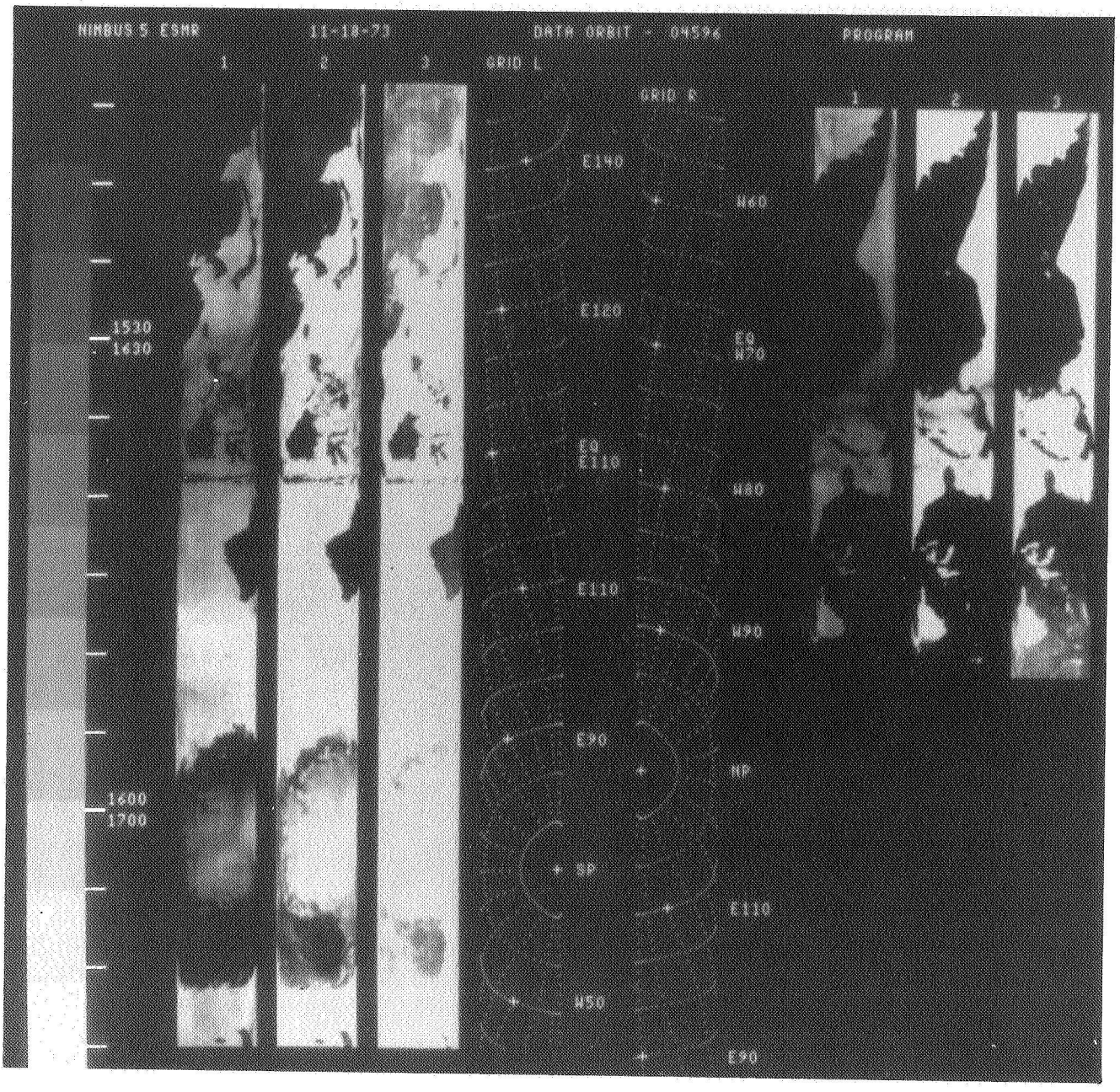

NIMBUS 5 ESMR
11-13-73
DATA ORBIT - 04525
PROGRAM
1
2
3
GRID L
GRID R
W120
W130
EQ
E30
EQ
W140
E30
W150
E10
W160
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SP
W150
E60
W140
E40
0830
0930
0900
1000

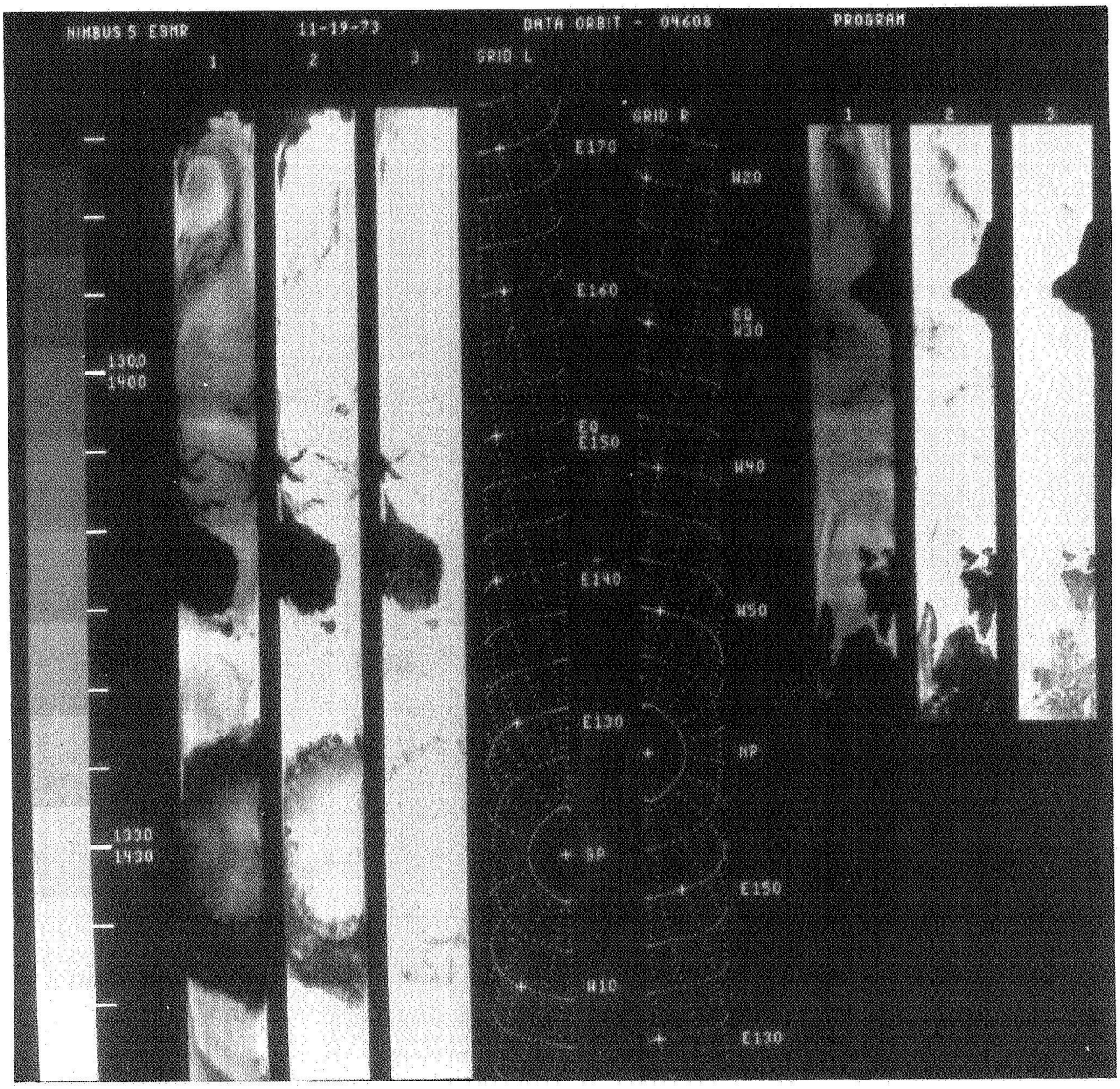

NIMBUS 5 ESMR
11-14-73
DATA ORBIT - 04545
PROGRAM
1
2
3
GRID L
GRID R
2000
2100
2030
2130
NP
W120
E60
W130
E50
E0
W140
E0
E40
W150
E30
W160
E20
NP
SP
E40

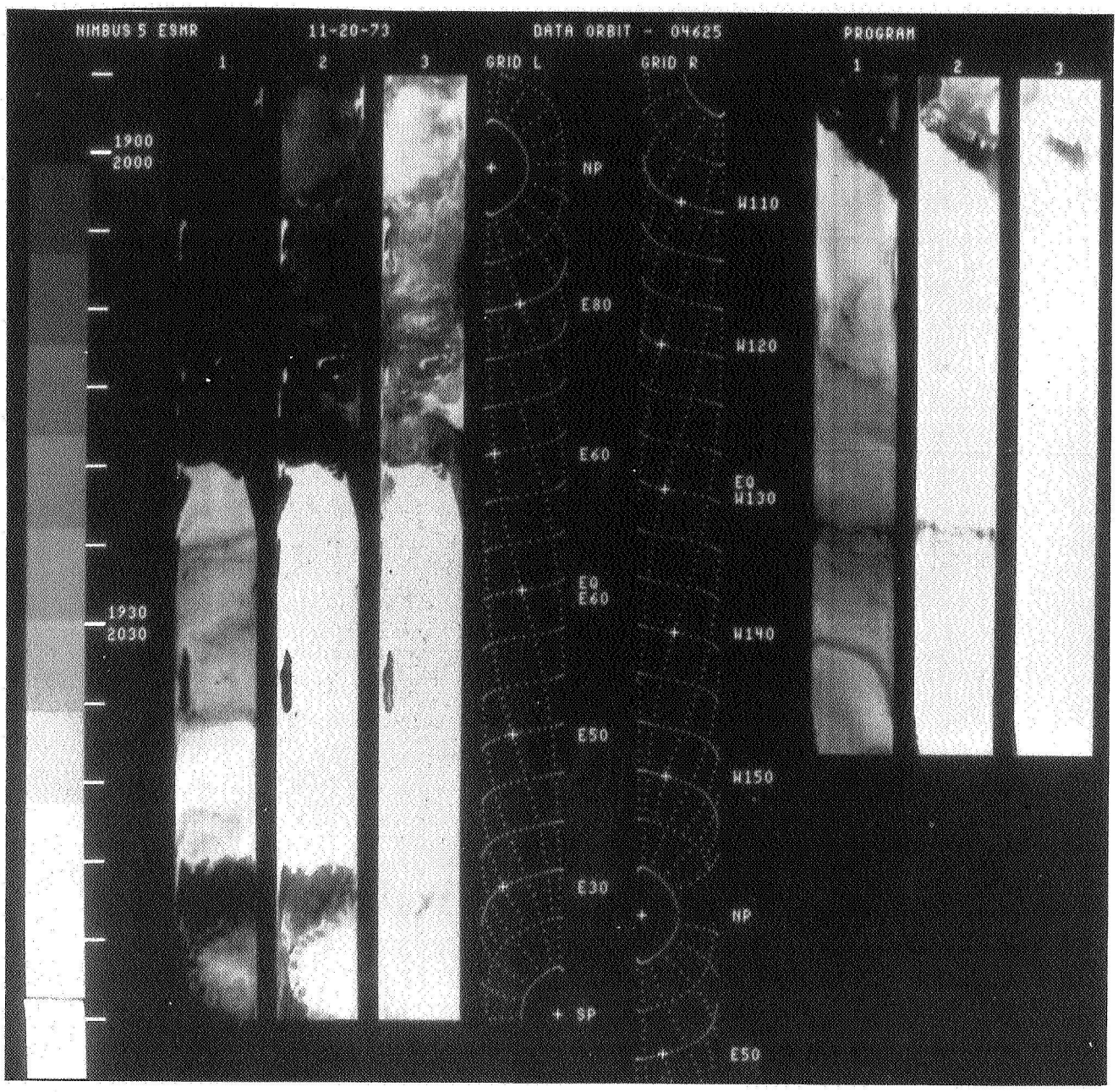

NIMBUS 5 ESMR
11-15-73
DATA ORBIT - 04549
PROGRAM
1
2
3
GRID L
GRID R
W40
E120
W60
EQ
E110
EQ
W70
E100
W70
E90
W90
NP
SP
W70
E130
W90
0330
0430
0400
0500

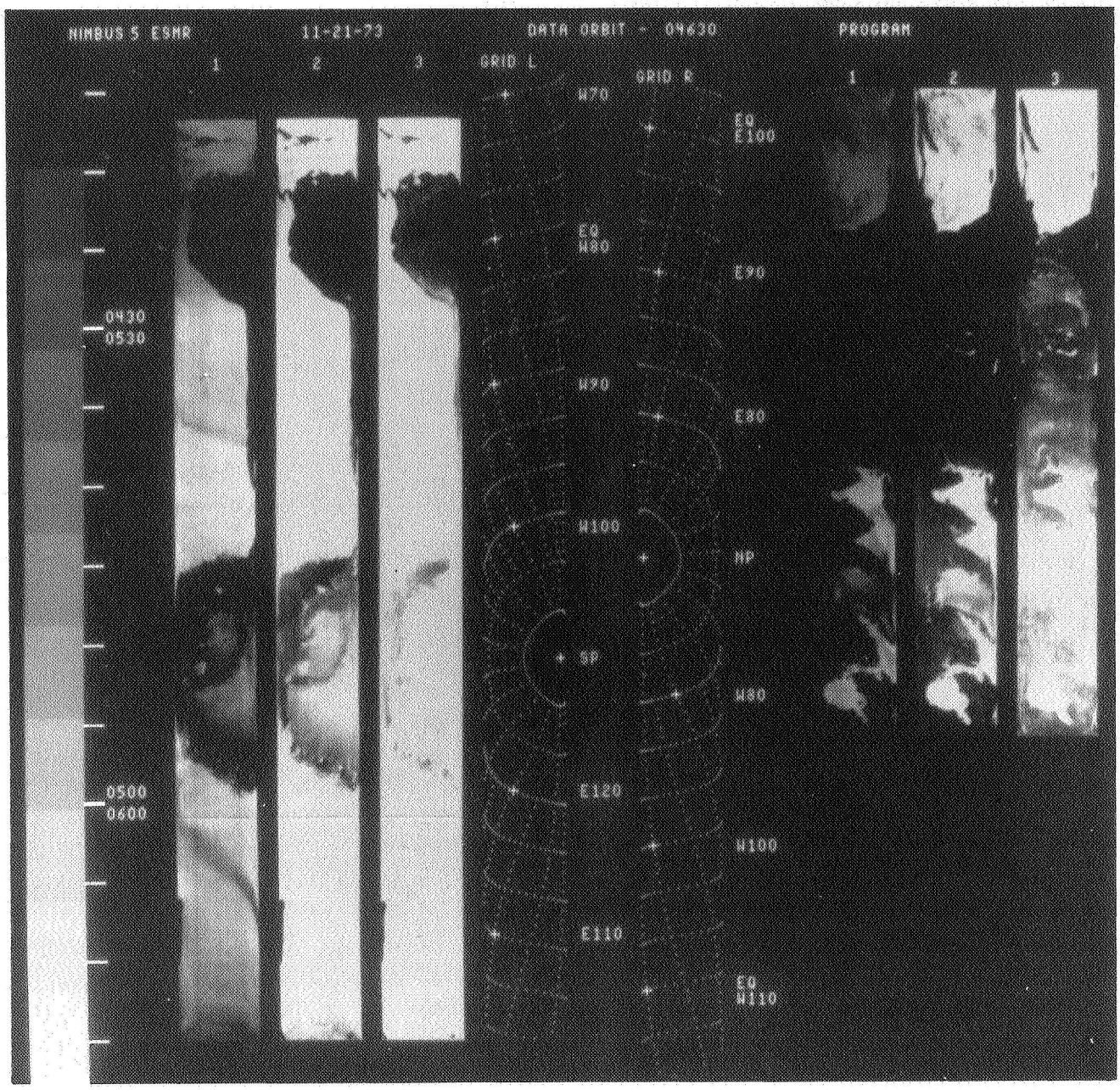

NIMBUS 5 ESMR
11-16-73
DATA ORBIT - 04568
PROGRAM
1
2
3
GRID L
GRID R
E170
W30
E150
EQ
W40
EQ
E140
W50
E140
W60
E120
NP
SP
E140
W20
E130
1330
1430
1400
1500

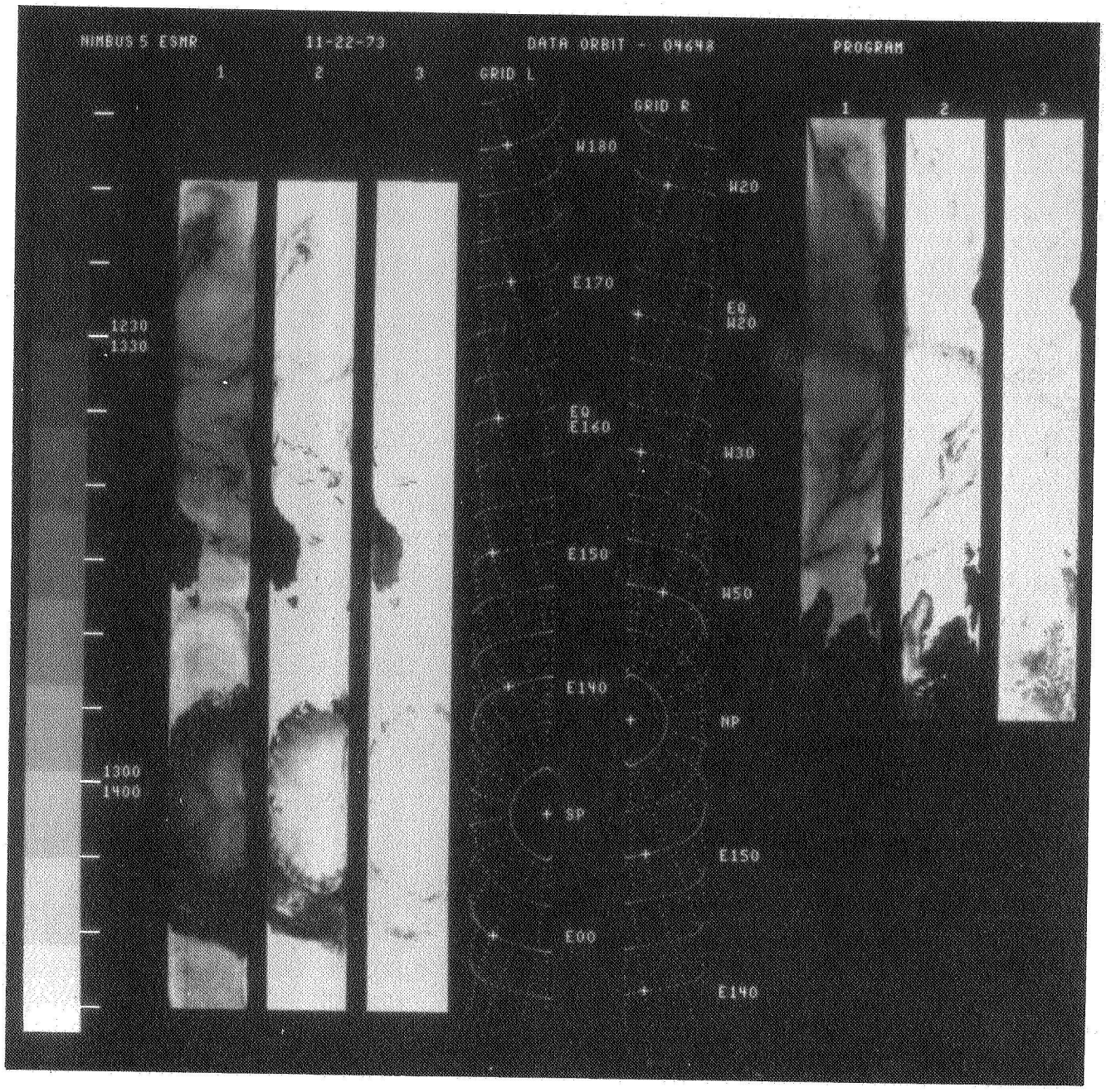

NIMBUS 5 ESMR
11-17-73
DATA ORBIT - 04583
PROGRAM
1
2
3
GRID L
GRID R
1600
1700
1630
1730
E120
W70
E110
EQ
W80
EQ
E100
W90
E90
W100
E80
NP
SP
E100
W40

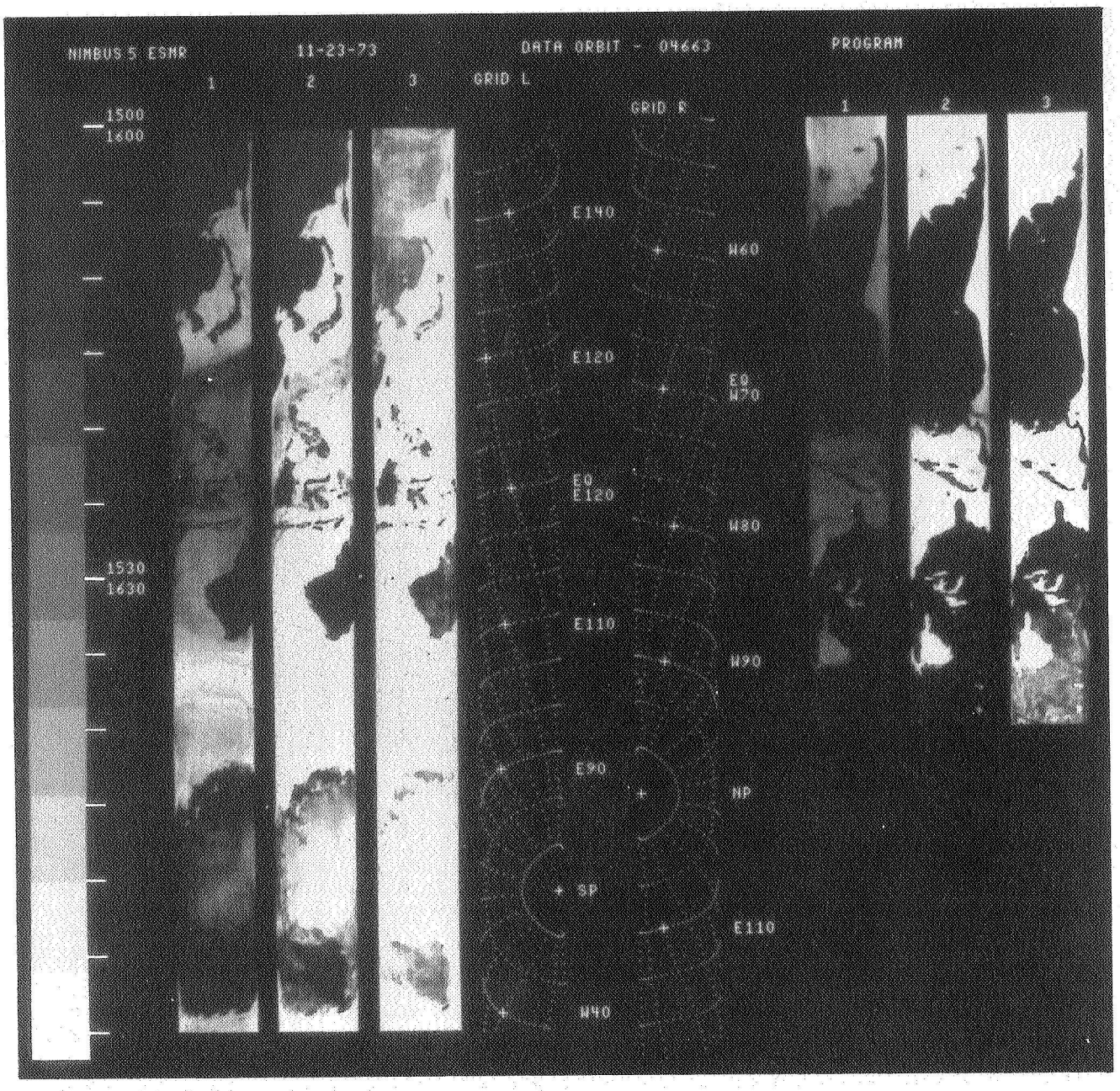

NIMBUS 5 ESMR
11-13-73
DATA ORBIT - 04594
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E140
N60
E120
EQ
N70
EQ
E110
N80
E110
N90
E90
NP
SP
E110
S50
E90
1530
1630
1600
1700

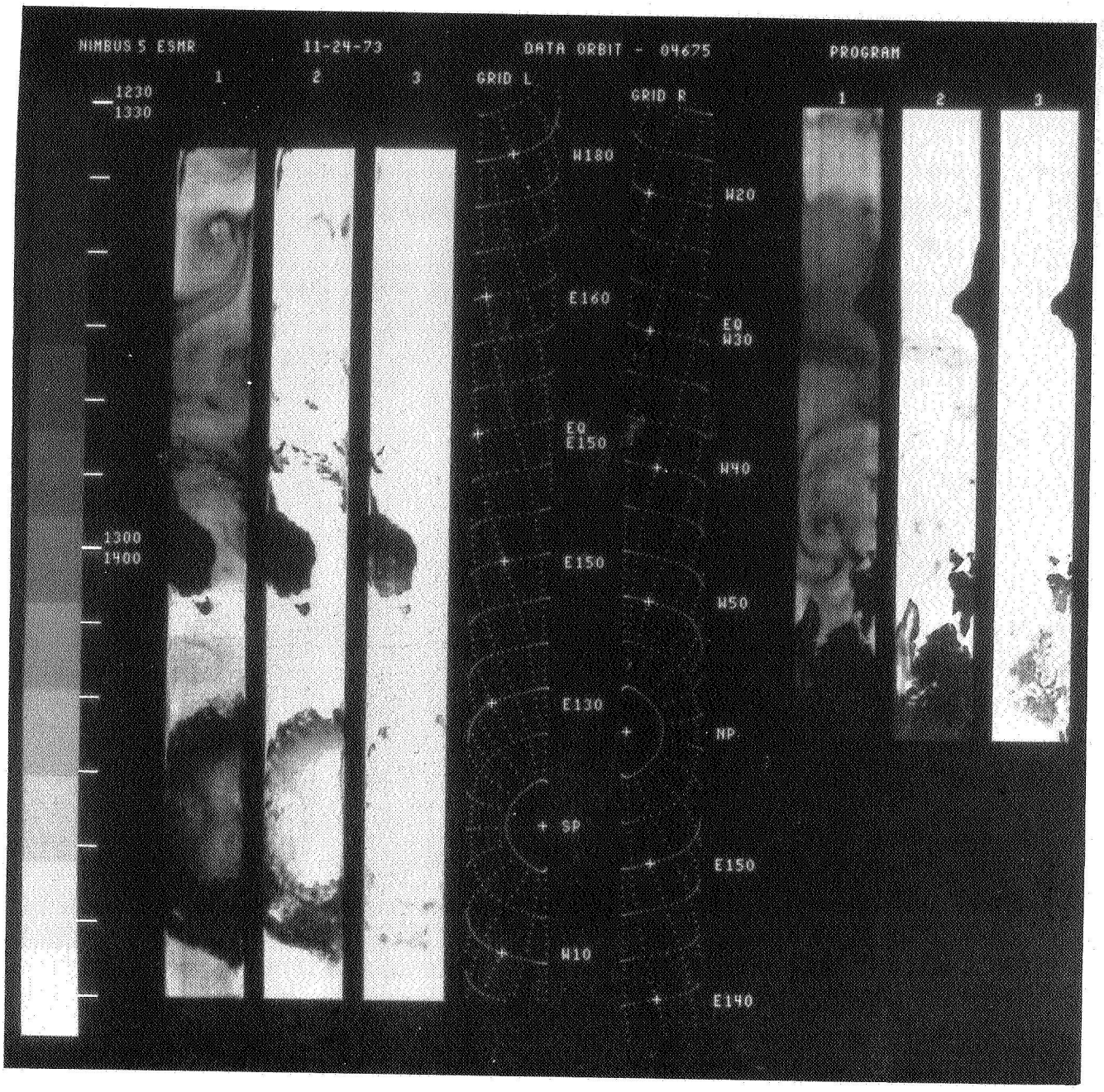

NIMBUS 5 ESMR
11-19-73
DATA ORBIT - 04608
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
E170
W20
E160
EQ
W30
EQ
E150
W40
E140
W50
E130
NP
SP
E150
W10
E130
1300
1400
1330
1430

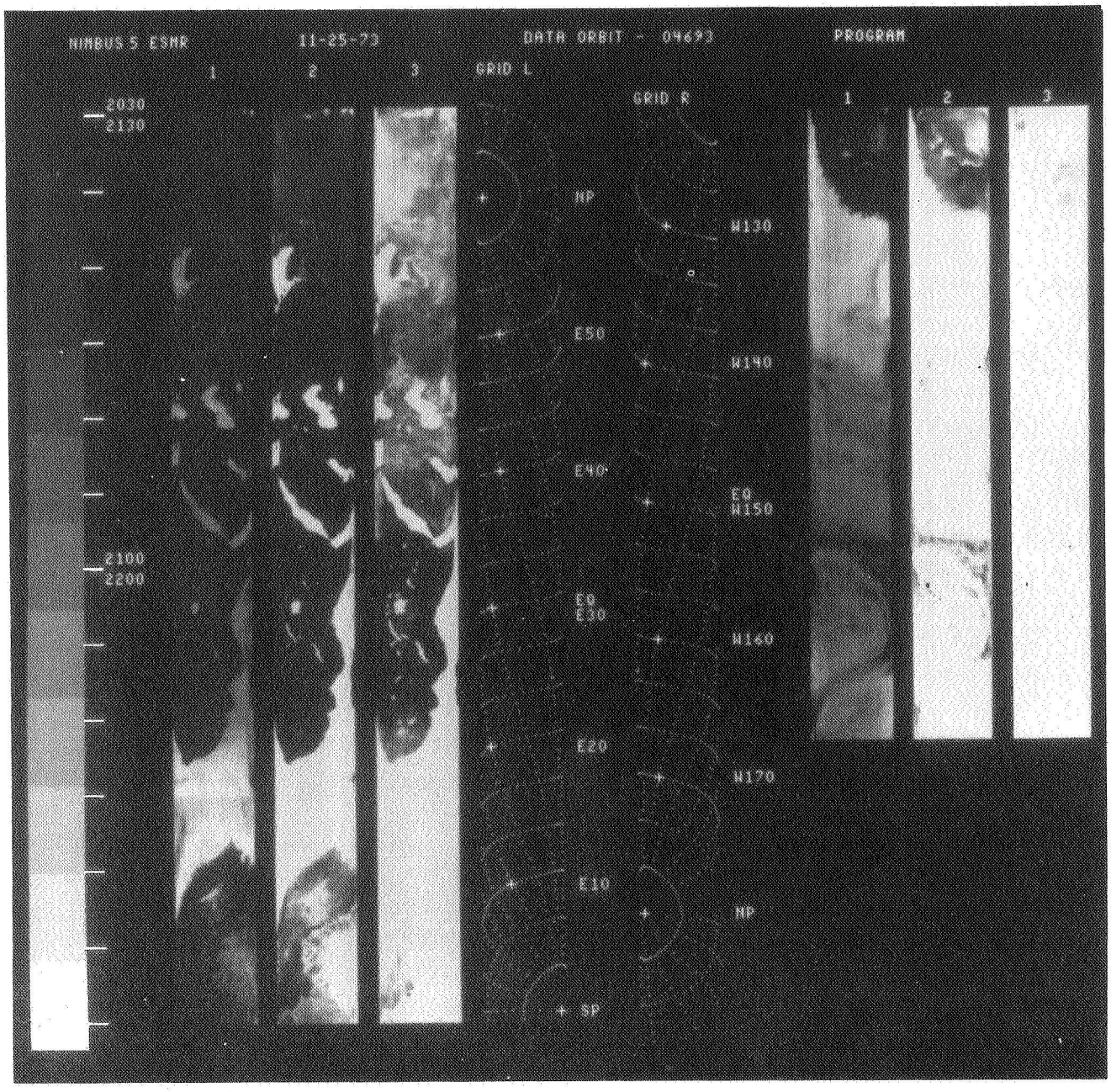

NIMBUS 5 ESMR
11-20-73
DATA ORBIT - 04625
PROGRAM
1
2
3
GRID L
GRID R
1900
2000
1930
2030
NP
W110
E80
W120
E60
EQ
W130
EQ
E60
W140
E50
W150
E30
NP
SP
E50

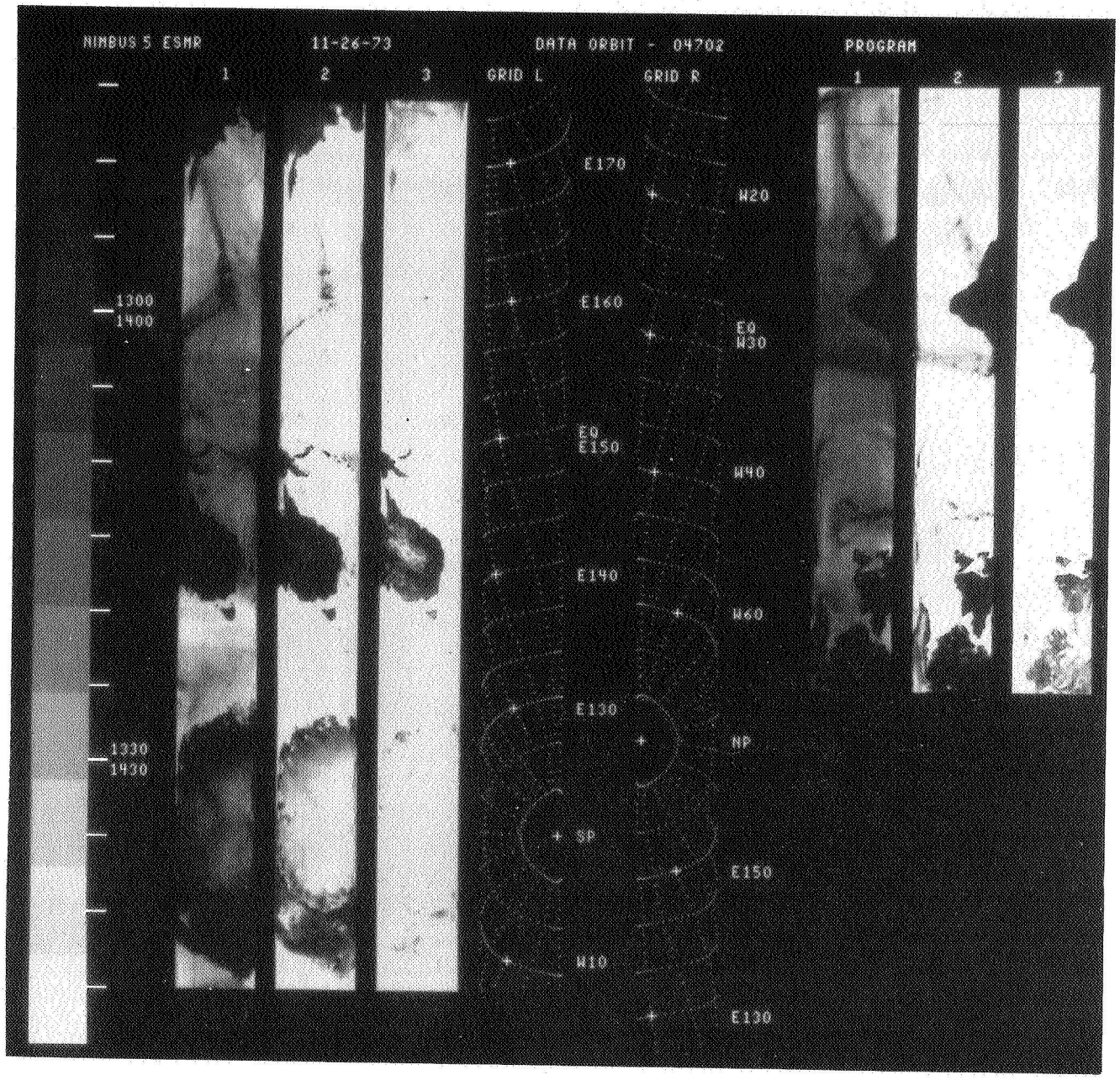

NIMBUS 5 ESMR
11-21-72
DATA ORBIT - 04630
PROGRAM
1
2
3
GRID L
GRID R
W70
EQ
E100
EQ
W80
E90
W90
E80
W100
HP
SP
W80
E120
W100
E110
EQ
W110
0430
0530
0500
0400

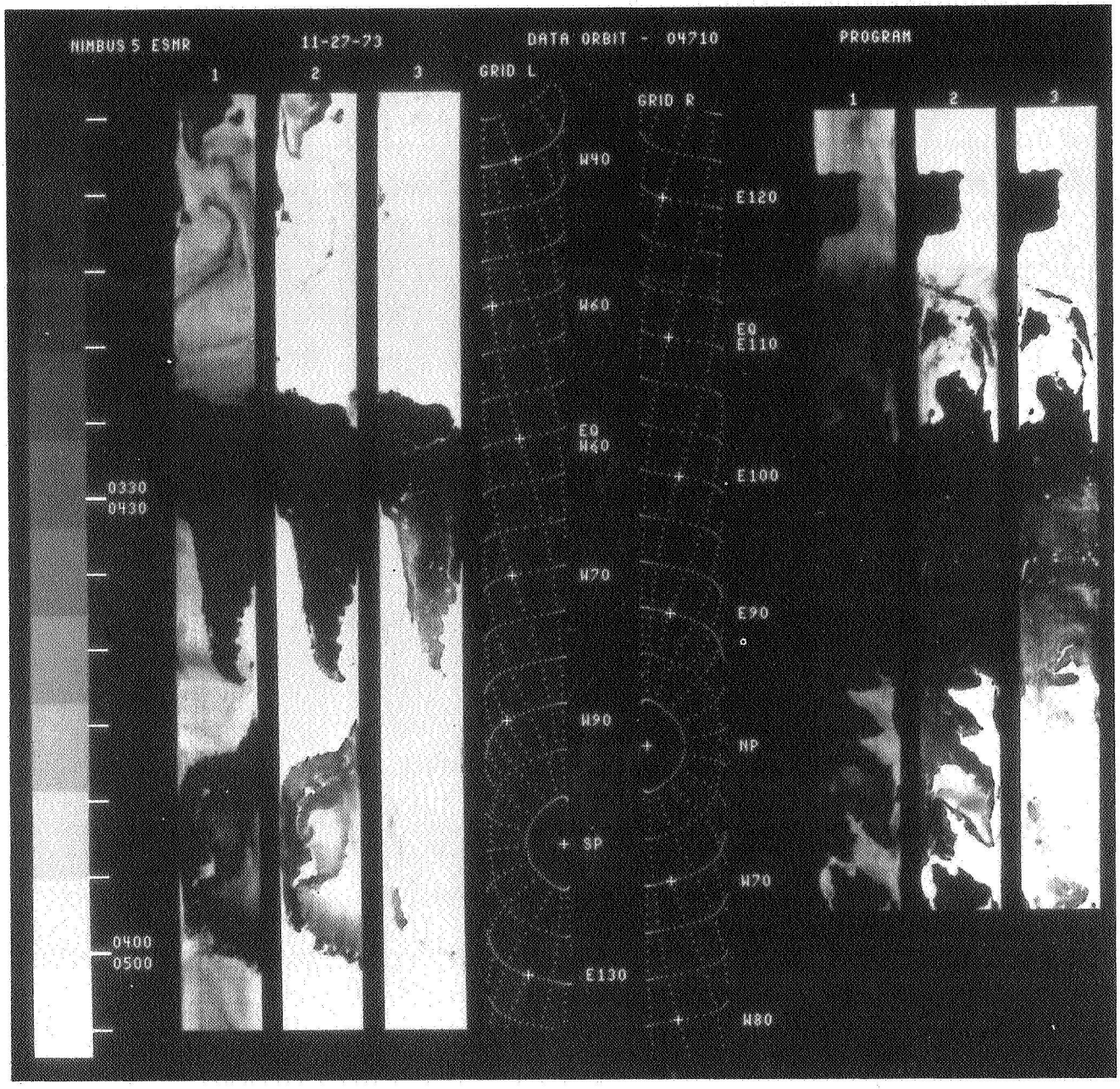

NIMBUS 5 ESMR
11-22-73
DATA ORBIT - 04648
PROGRAM
1
2
3
GRID L
GRID R
W180
W20
E170
E0
W20
E0
E160
W30
E150
W50
E140
NP
SP
E150
E00
E140
1230
1330
1300
1400

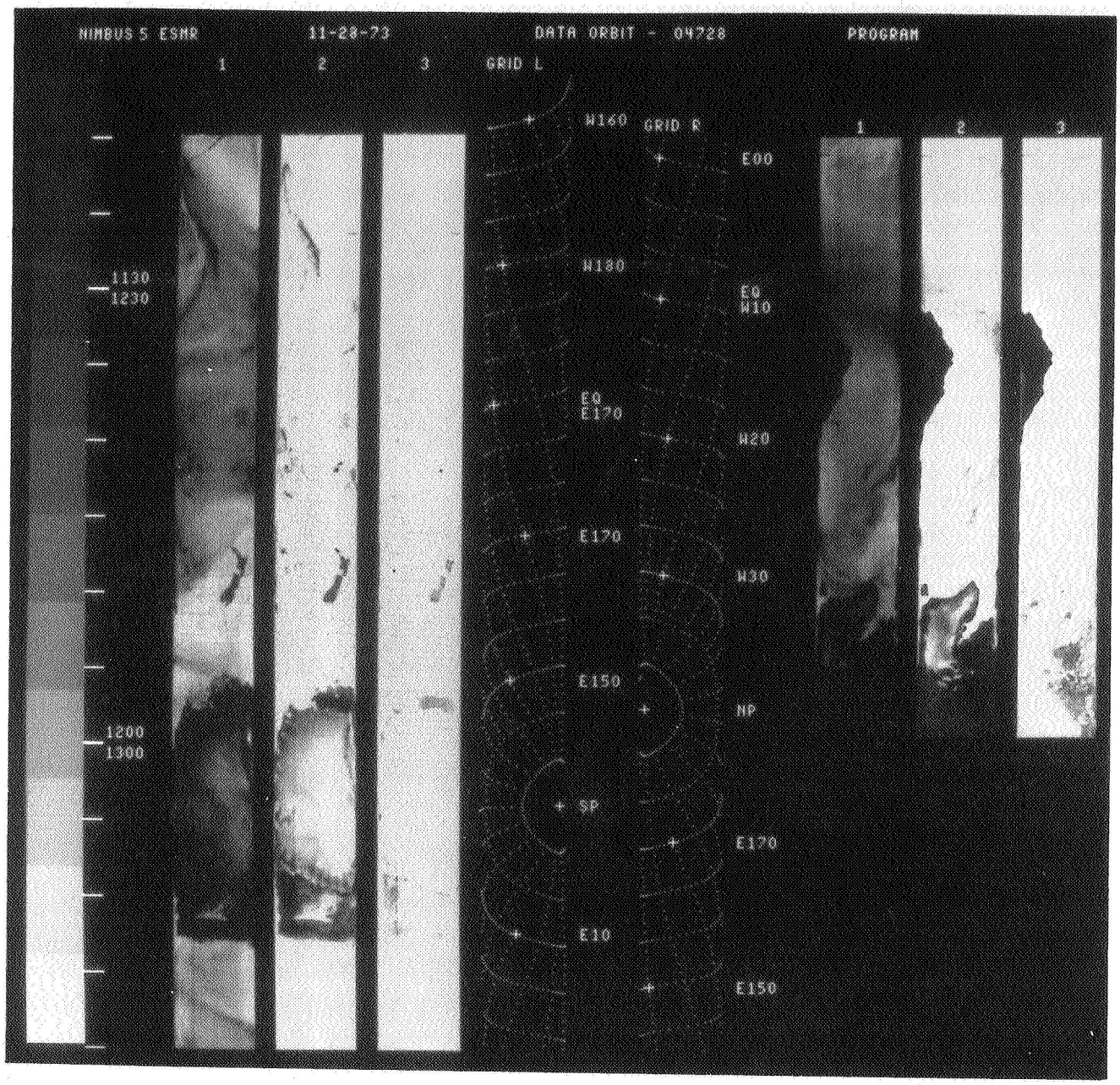

NIMBUS 5 ESMR
11-23-73
DATA ORBIT - 04643
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
1500
1600
1530
1630
E140
W60
E120
E0
W70
E0
E120
W80
E110
W90
E90
NP
SP
E110
W40

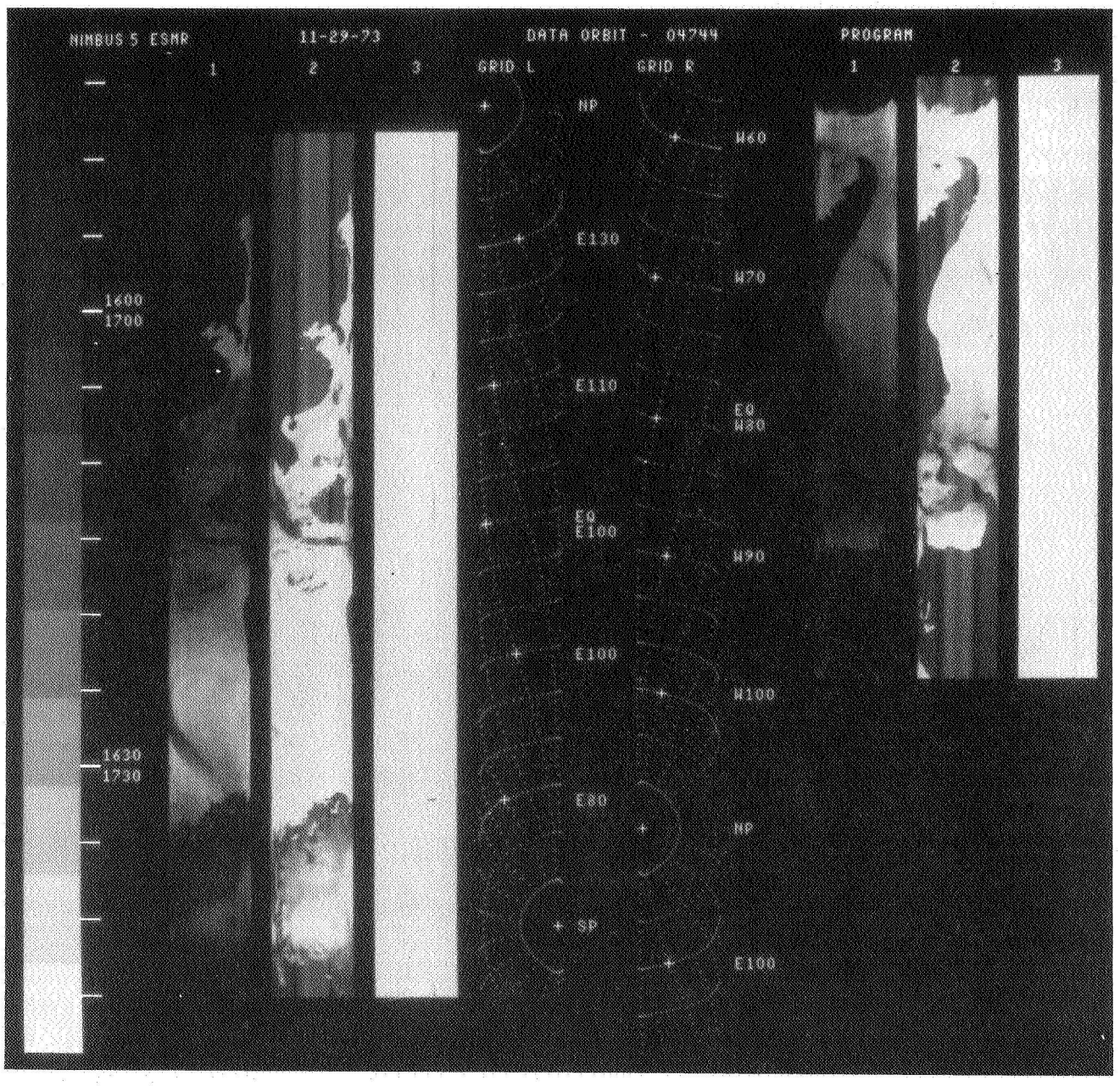

NIMBUS 5 ESMR
11-24-73
DATA ORBIT - 04675
PROGRAM
1
2
3
GRID L
GRID R
1230
1330
1300
1400
W180
W20
E160
EQ
W30
EQ
E150
W40
E150
W50
E130
NP
SP
E150
W10
E140

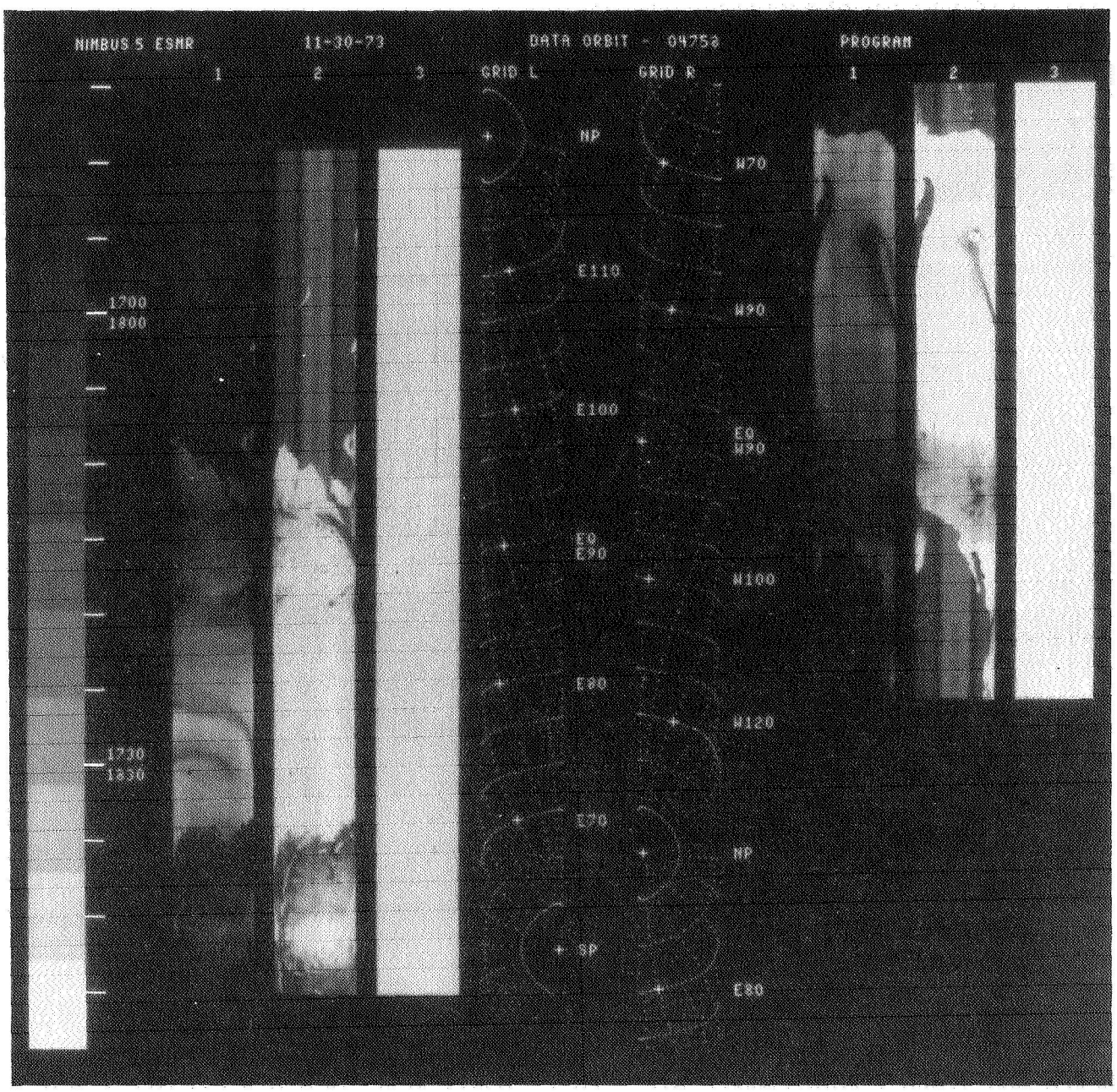

NIMBUS 5 ESMR
11-25-73
DATA ORBIT - 04693
PROGRAM
1
2
3
GRID L
GRID R
2030
2130
2100
2200
NP
W130
E50
W140
E40
EQ
W150
EQ
E30
W160
E20
W170
E10
NP
SP


NIMBUS 5 ESMR
11-26-73
DATA ORBIT - 04702
PROGRAM
1
2
3
GRID L
GRID R
1300
1400
1330
1430
E170
W20
E160
EQ
W30
EQ
E150
W40
E140
W60
E130
NP
SP
E150
W10
E130


NIMBUS 5 ESMR
11-27-73
DATA ORBIT - 04710
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W40
E120
W60
EQ
E110
EQ
W40
E100
W70
E90
W90
NP
SP
W70
E130
W80
0330
0430
0400
0500


NIMBUS 5 ESMR
11-28-73
DATA ORBIT - 04728
PROGRAM
1
2
3
GRID L
GRID R
1
2
3
W160
E00
W180
EQ
W10
EQ
E170
W20
E170
W30
E150
NP
SP
E170
E10
E150
1130
1230
1200
1300


NIMBUS 5 ESMR
11-29-73
DATA ORBIT - 04744
PROGRAM
1
2
3
GRID L
GRID R
NP
W60
E130
W70
1600
1700
E110
EQ
W30
EQ
E100
W90
E100
W100
1630
1720
E80
NP
SP
E100


NIMBUS 5 ESMR
11-30-73
DATA ORBIT - 04756
PROGRAM
1
2
3
GRID L
GRID R
NP
W70
E110
W90
E100
EQ
W90
EQ
E90
W100
E80
W120
E70
NP
SP
E80
1200
1800
1230
1830

SECTION 4

TEMPERATURE HUMIDITY INFRARED RADIOMETER MONTAGES

This section pictorially documents the data from the Temperature Humidity Infrared Radiometer subsystem carried on the Nimbus 5 Meteorological Satellite. Section 4.1 contains all nighttime THIR 11.5 and 6.7 micrometer montages and Section 4.2 contains all daytime THIR 11.5 and 6.7 micrometer montages, arranged in chronological order. Key latitudes can be read from the superposed grids. Grid points are identified where each swath crosses 60°N, 30°N, EQUATOR, 30°S, and 60°S.

Vellum Location Guide overlays, attached to the back of this document, may be used for general orientation with the data presented in each THIR montage. Proper alignment of the overlay grid is accomplished by matching the grid indices on the equator with the two "T" marks on each montage.

Each THIR montage is provided with a time scale to determine the Greenwich Mean Time limits required to order processed THIR grid print maps (see page 38, The Nimbus 5 User's Guide). The time scale is used to determine the number of minutes from ascending (daytime data) or descending (nighttime data) node time for the interval of data required. To obtain the GMT for daytime data, the measured time is to be added to the ascending node time in the northern hemisphere and subtracted in the southern hemisphere. For nighttime data, the measured time is to be subtracted from the descending node time in the northern hemisphere and added in the southern hemisphere. The ascending and descending node times are given in Table 2-2 of Section 2.

The following alternate procedure also establishes GMT limits. Knowing the latitude limits of the study area, the minutes from ascending or descending node can be directly interpolated from Table 4-1. These time values can then be added to or subtracted from node times given in Table 2-2 of Section 2.

A description of the THIR experiment and instructions for ordering THIR data may be found in The Nimbus 5 User's Guide, Section 2.

Table 4-1

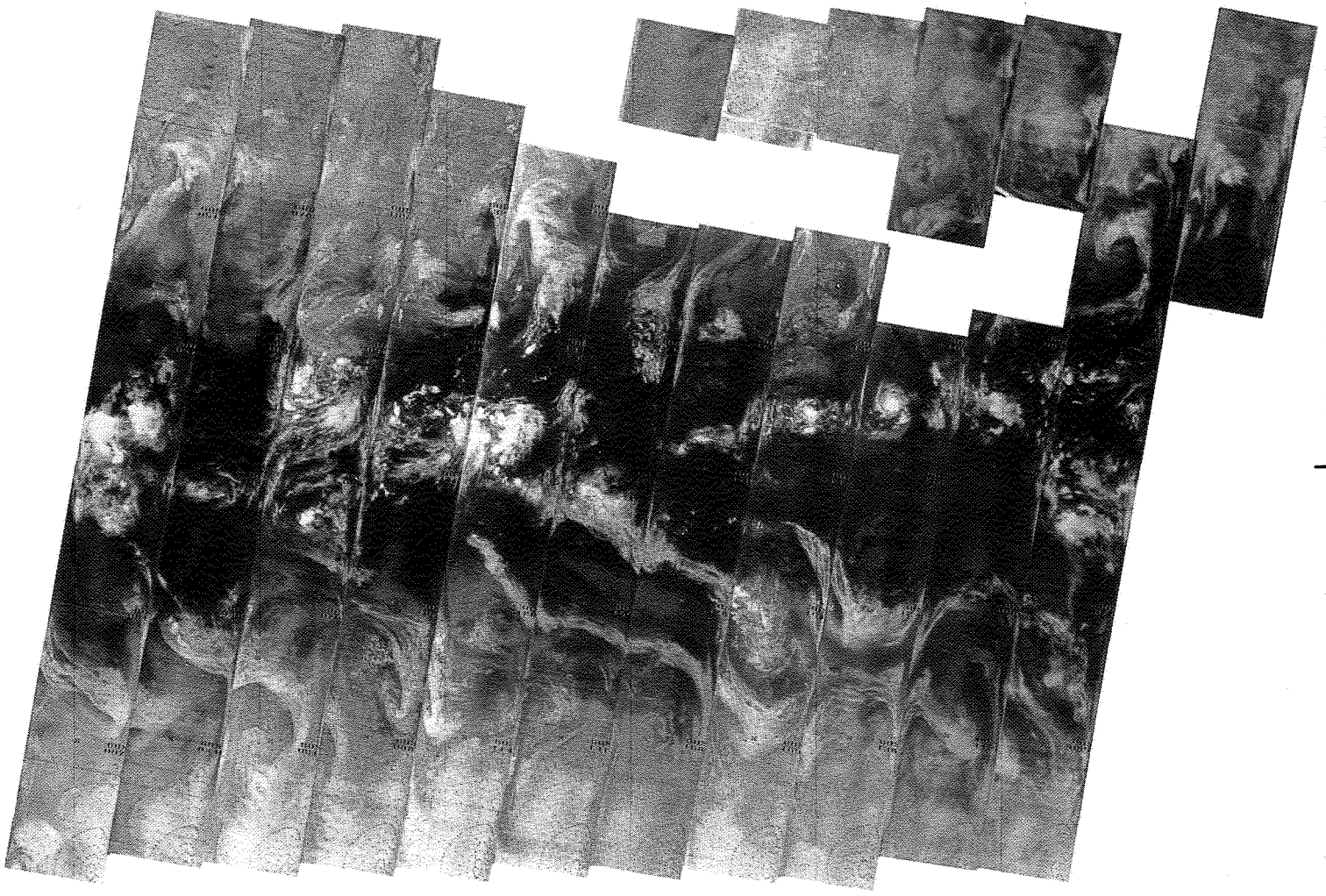
LATITUDE VERSUS MINUTES FROM
ASCENDING OR DESCENDING NODE

Latitude from AN or DN	Minutes and Seconds from AN or DN
0	0:00
5	1:31
10	3:02
15	4:33
20	6:03
25	7:34
30	9:05
35	10:36
40	12:08
45	13:40
50	15:12
55	16:44
60	18:18
65	19:52
70	21:33
75	23:26
78	24:44
80.1	26:49
78	29:00
75	30:09
70	31:51
65	33:35

SECTION 4.1

TEMPERATURE HUMIDITY INFRARED RADIOMETER

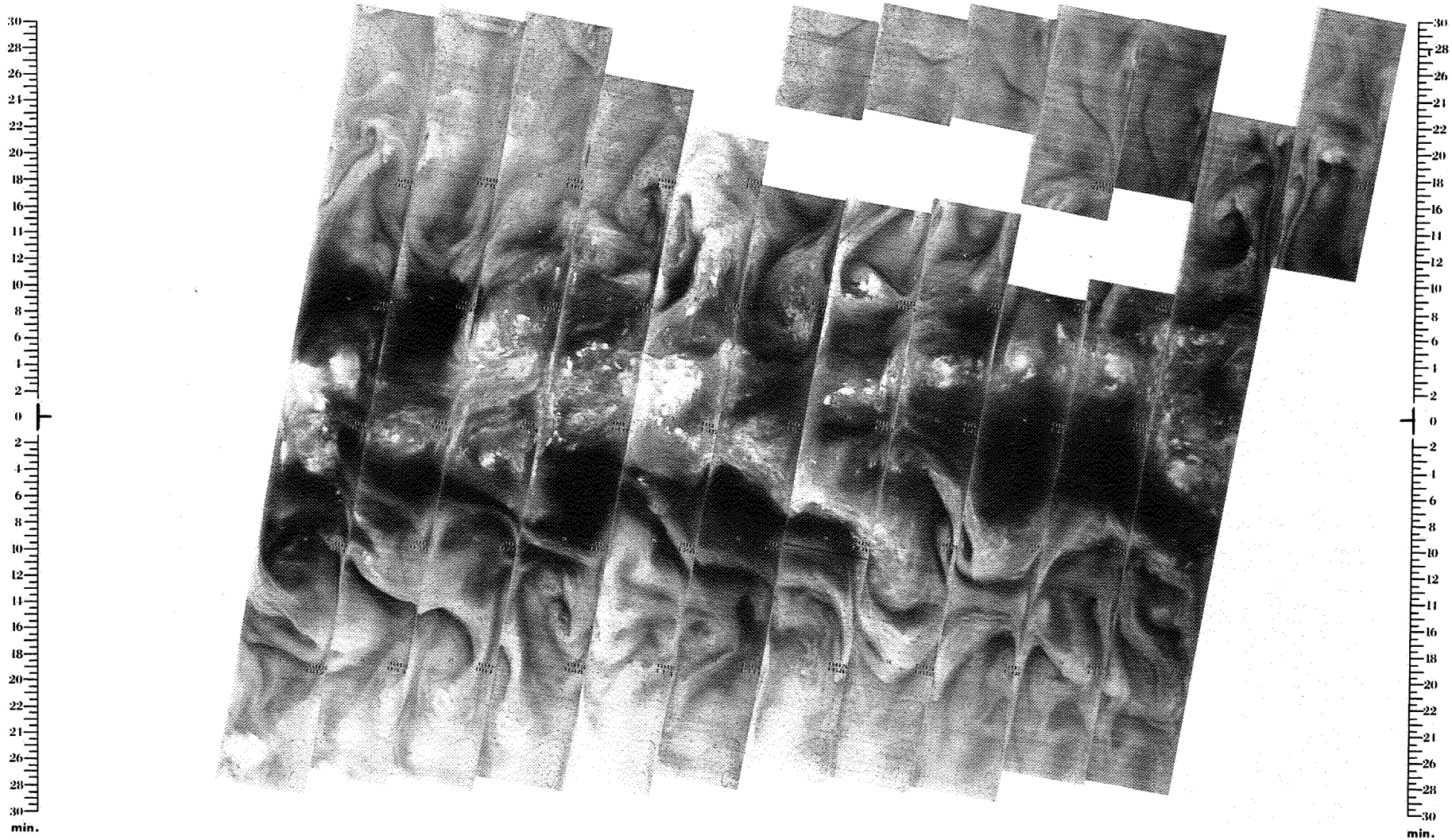
NIGHTTIME MONTAGES

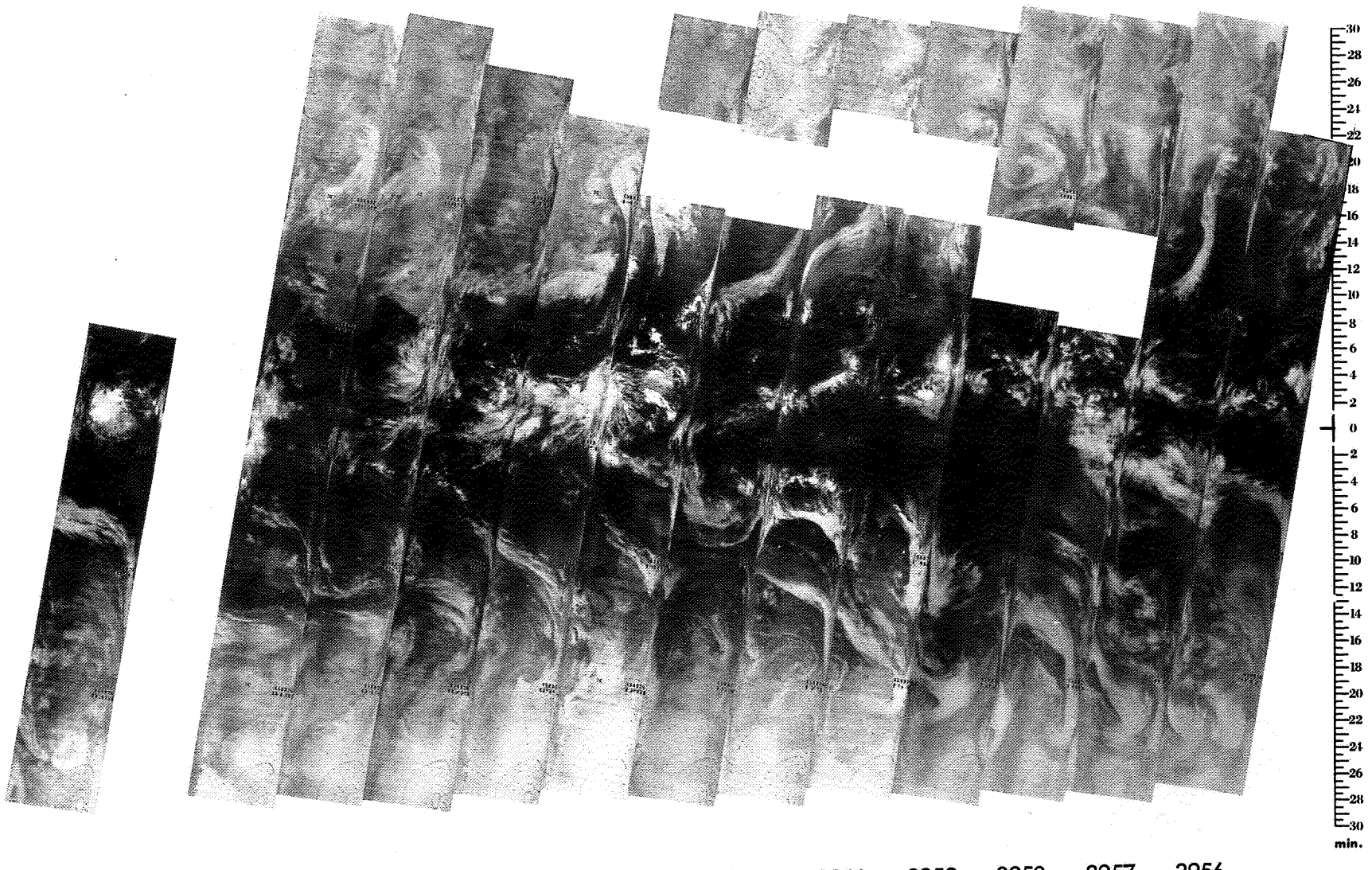


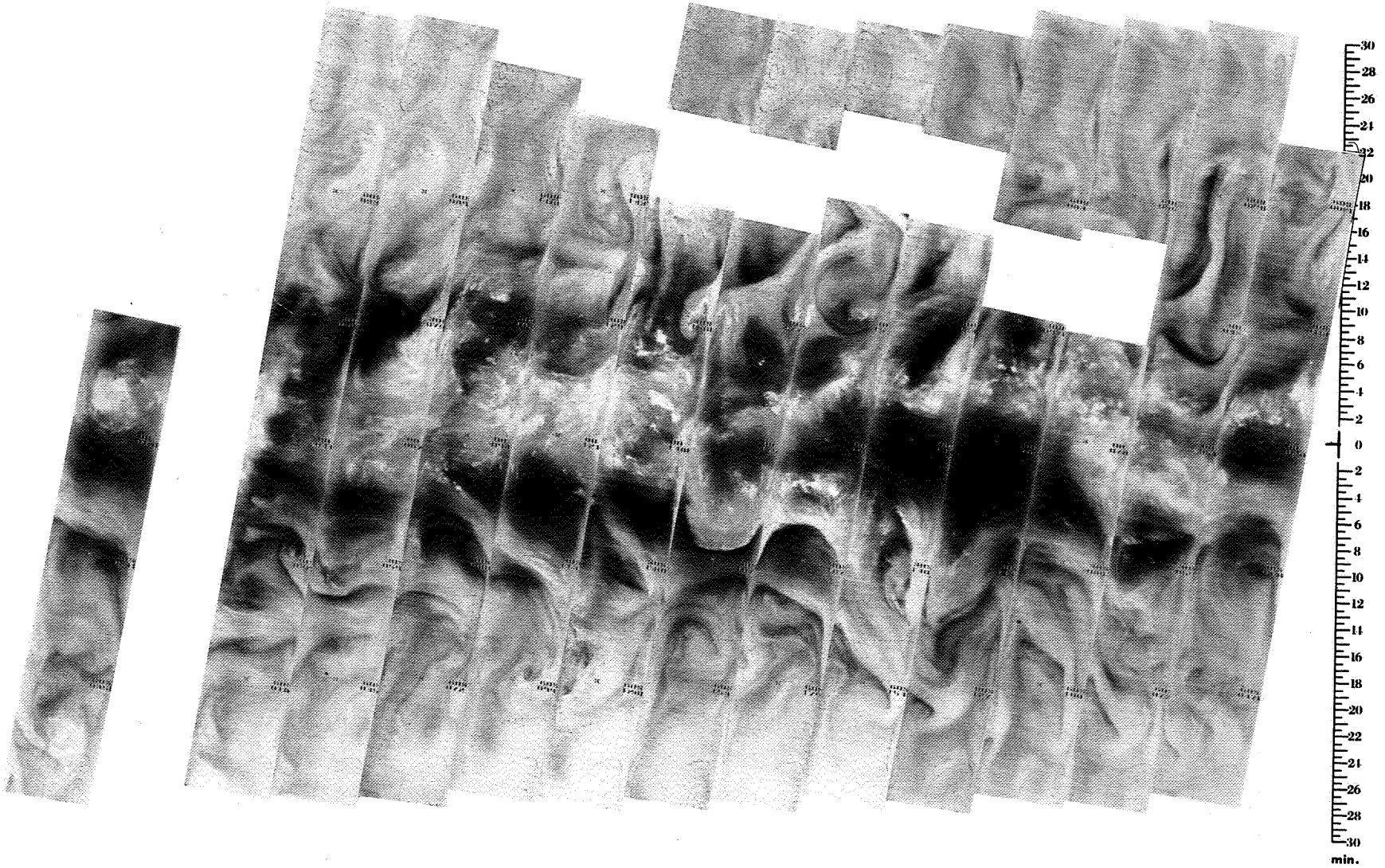
3955 3954 3953 3952 3951 3950 3949 3948 3947 3946 3945 3944 3943

1 OCTOBER 1973

11.5 μm


min.
min.
3955 3954 3953 3952 3951 3950 3949 3948 3947 3946 3945 3944 3943
1 OCTOBER 1973
6.7 μm


3969
3968
3967
3966
3965
3964
3963
3962
3961
3960
3959
3958
3957
3956
2 OCTOBER 1973
11.5 μm
in.
min.



4-7

2 OCTOBER 1973

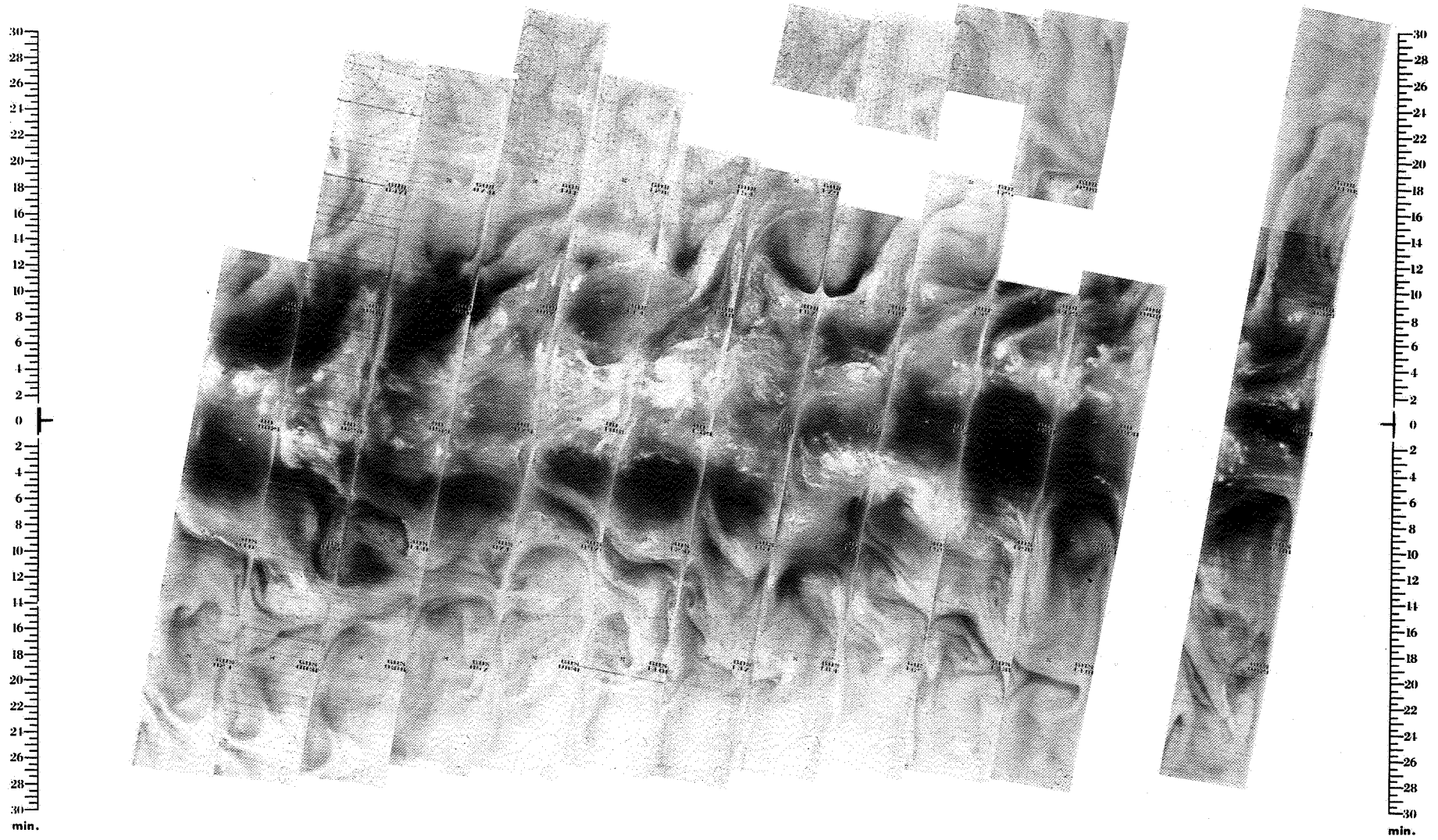
6.7 μm



3982 3981 3980 3979 3978 3977 3976 3975 3974 3973 3972 3971 3970

3 OCTOBER 1973

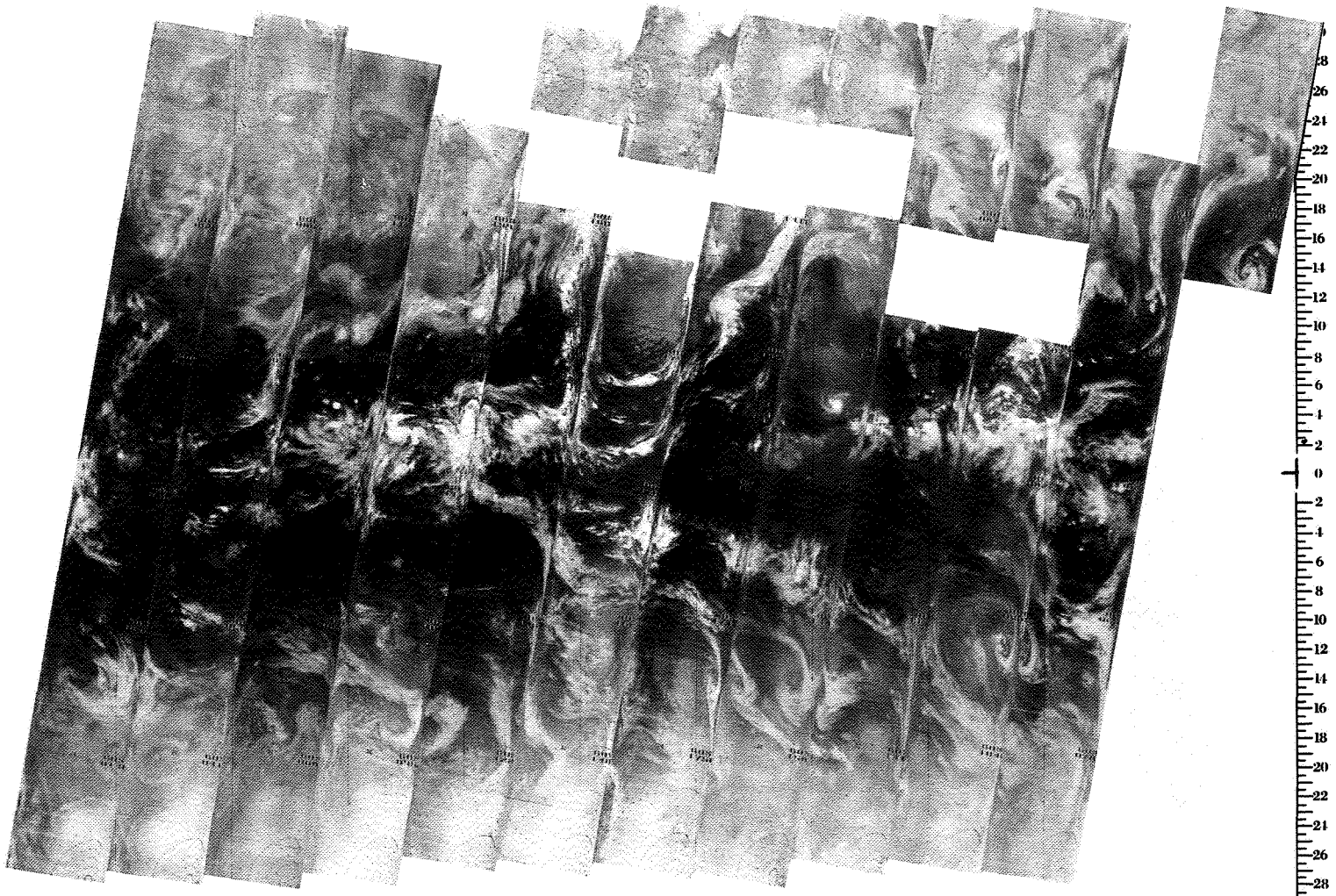
11.5 μm



3982 3981 3980 3979 3978 3977 3976 3975 3974 3973 3972 3971 3970

3 OCTOBER 1973

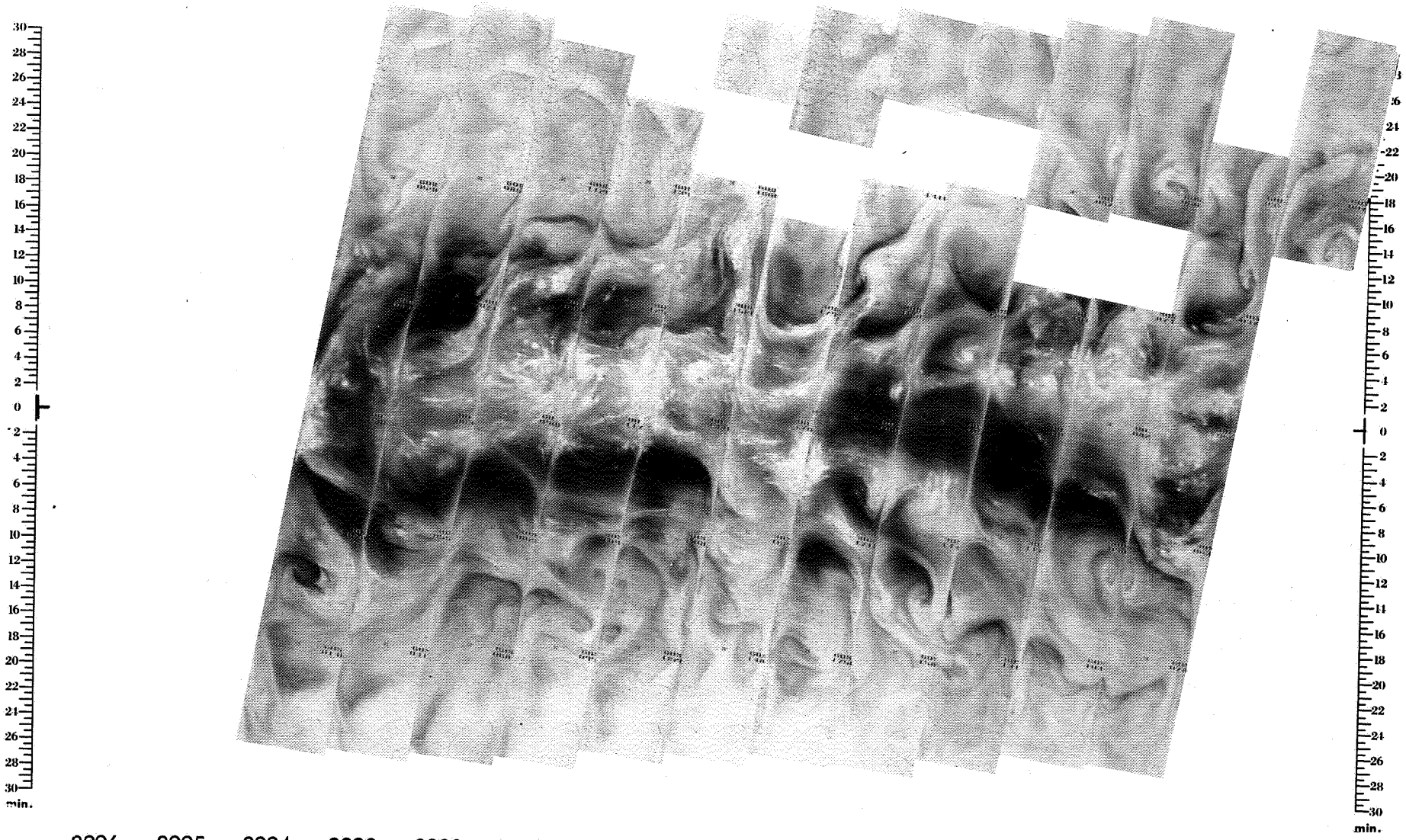
6.7 μm

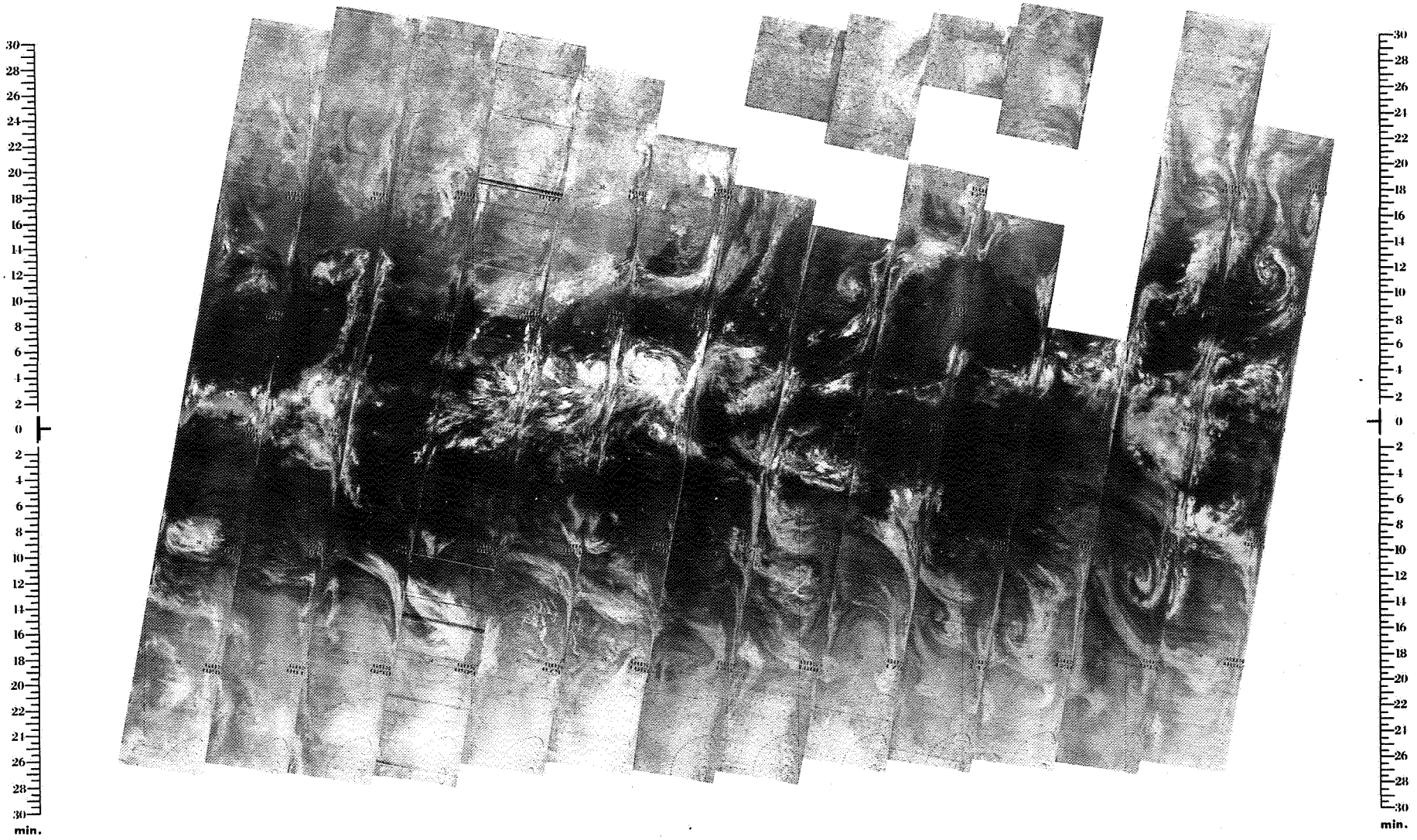


3996 3995 3994 3993 3992 3991 3990 3989 3988 3987 3986 3985 3984 3983

4 OCTOBER 1973

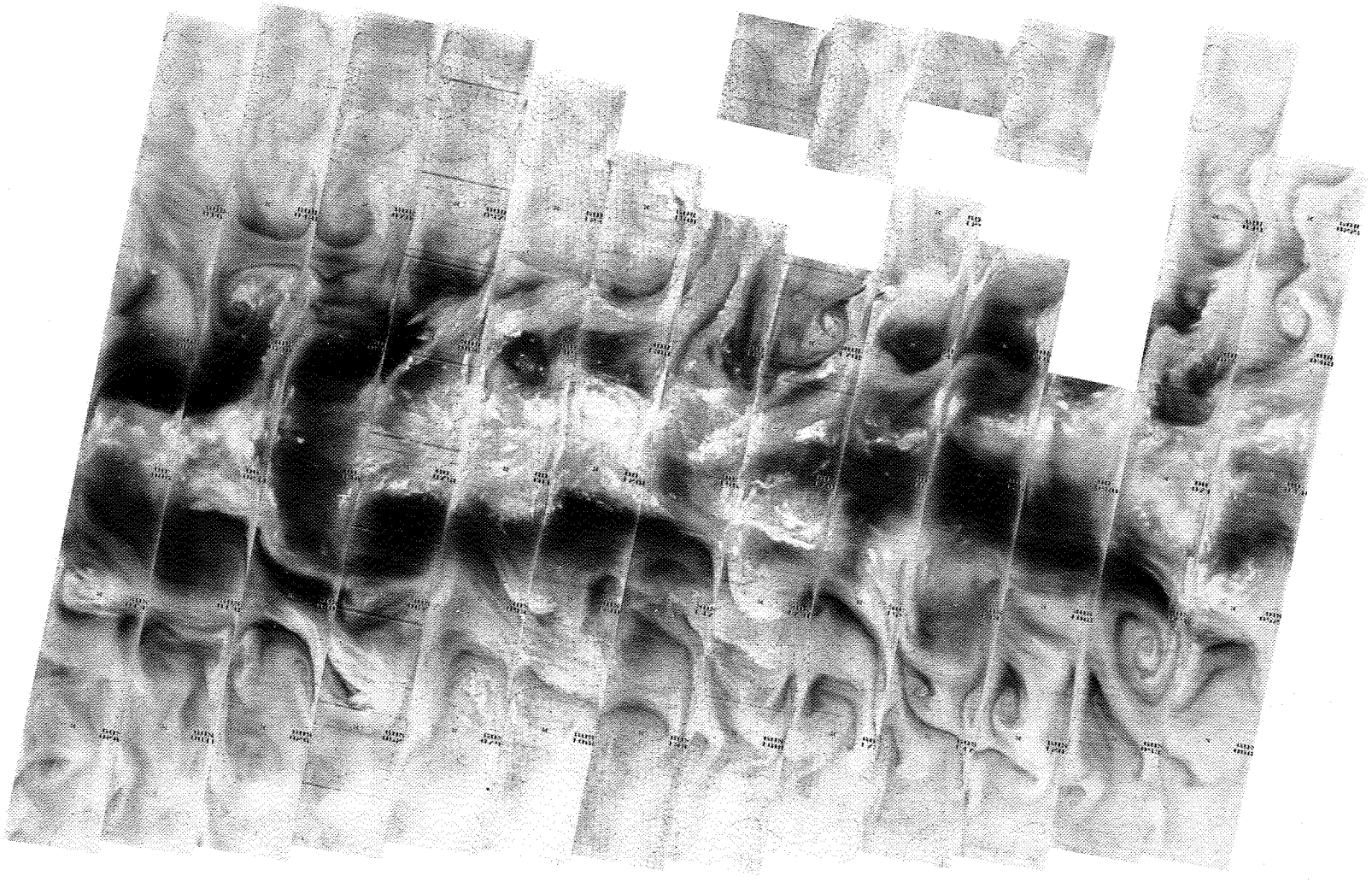
11.5 μm


min.
min.
3996 3995 3994 3993 3992 3991 3990 3989 3988 3987 3986 3985 3984 3983
4 OCTOBER 1973
6.7 μm



5 OCTOBER 1973

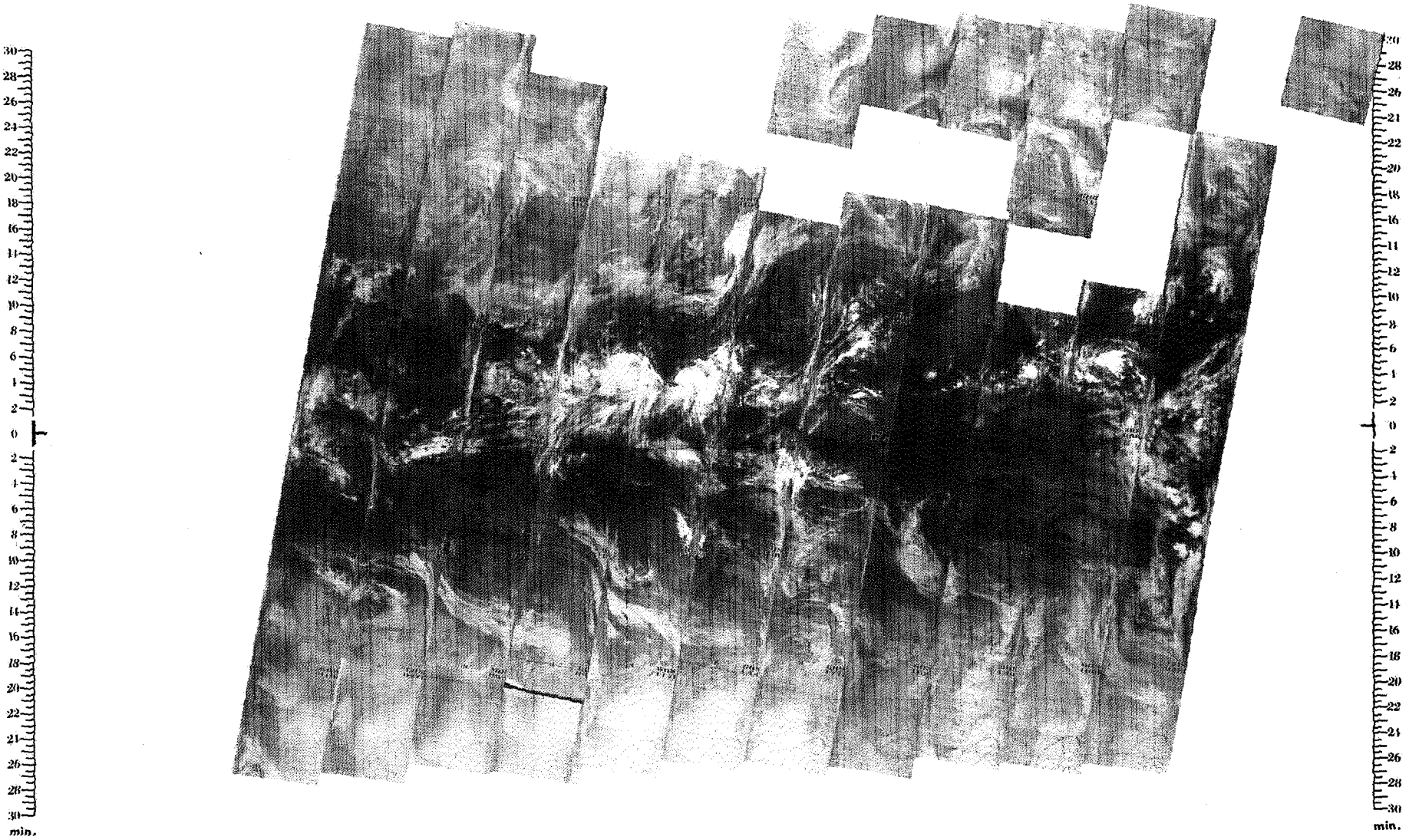
11.5 μm

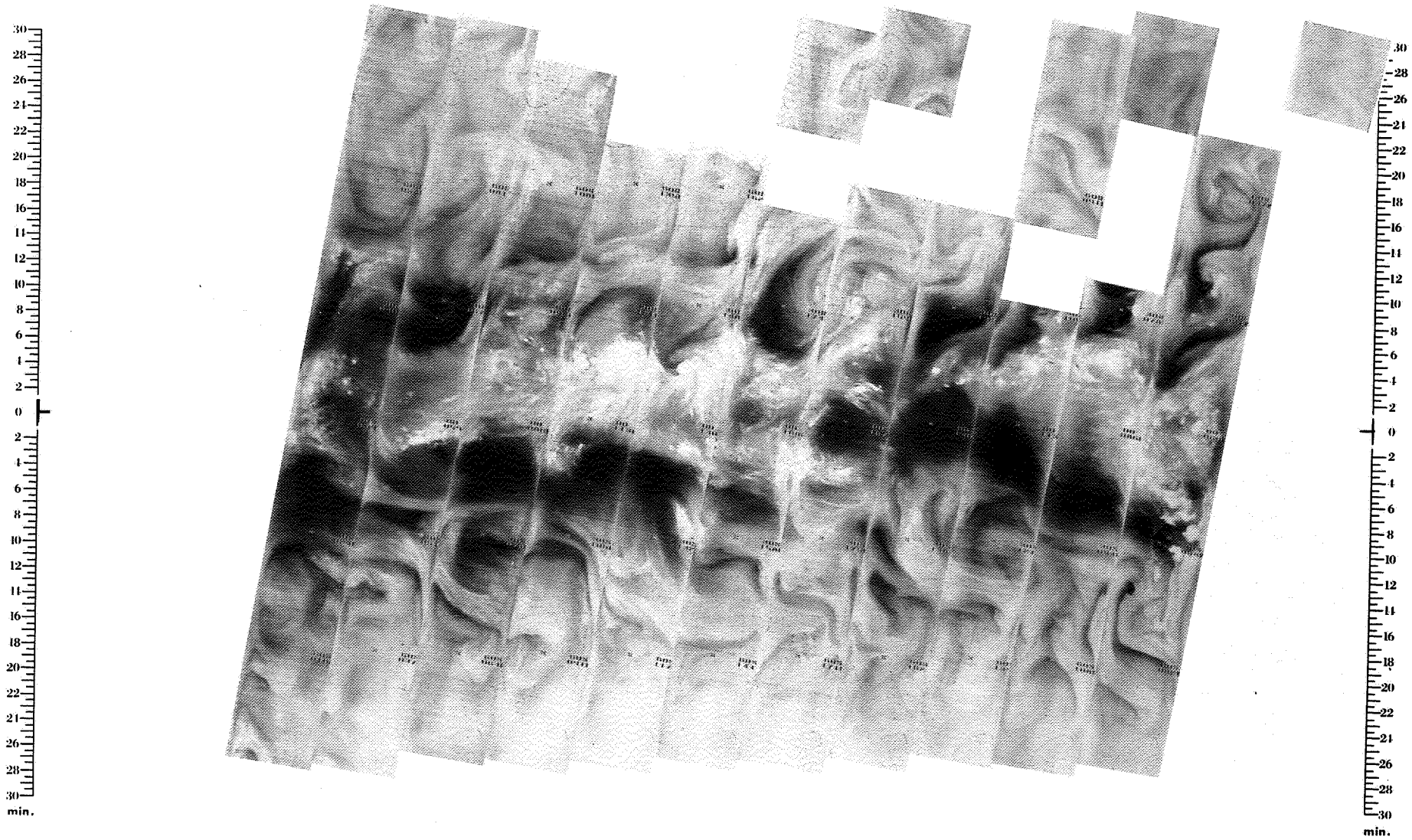


4009 4008 4007 4006 4005 4004 4003 4002 4001 4000 3999 3998 3997

5 OCTOBER 1973

6.7 μm

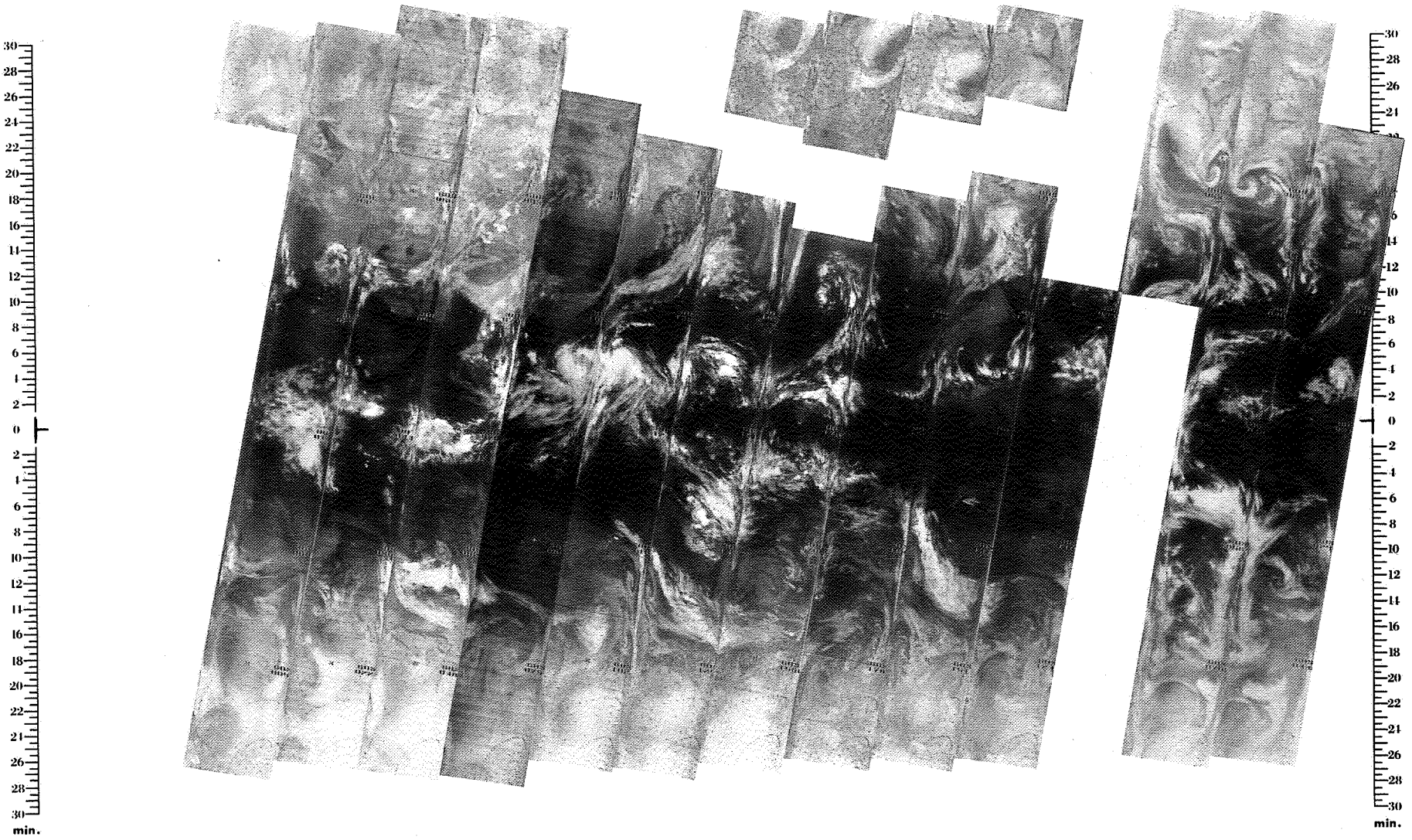

4022 4021 4020 4019 4018 4017 4016 4015 4014 4013 4012 4011 4010
6 OCTOBER 1973
11.5 μm
min.
min.

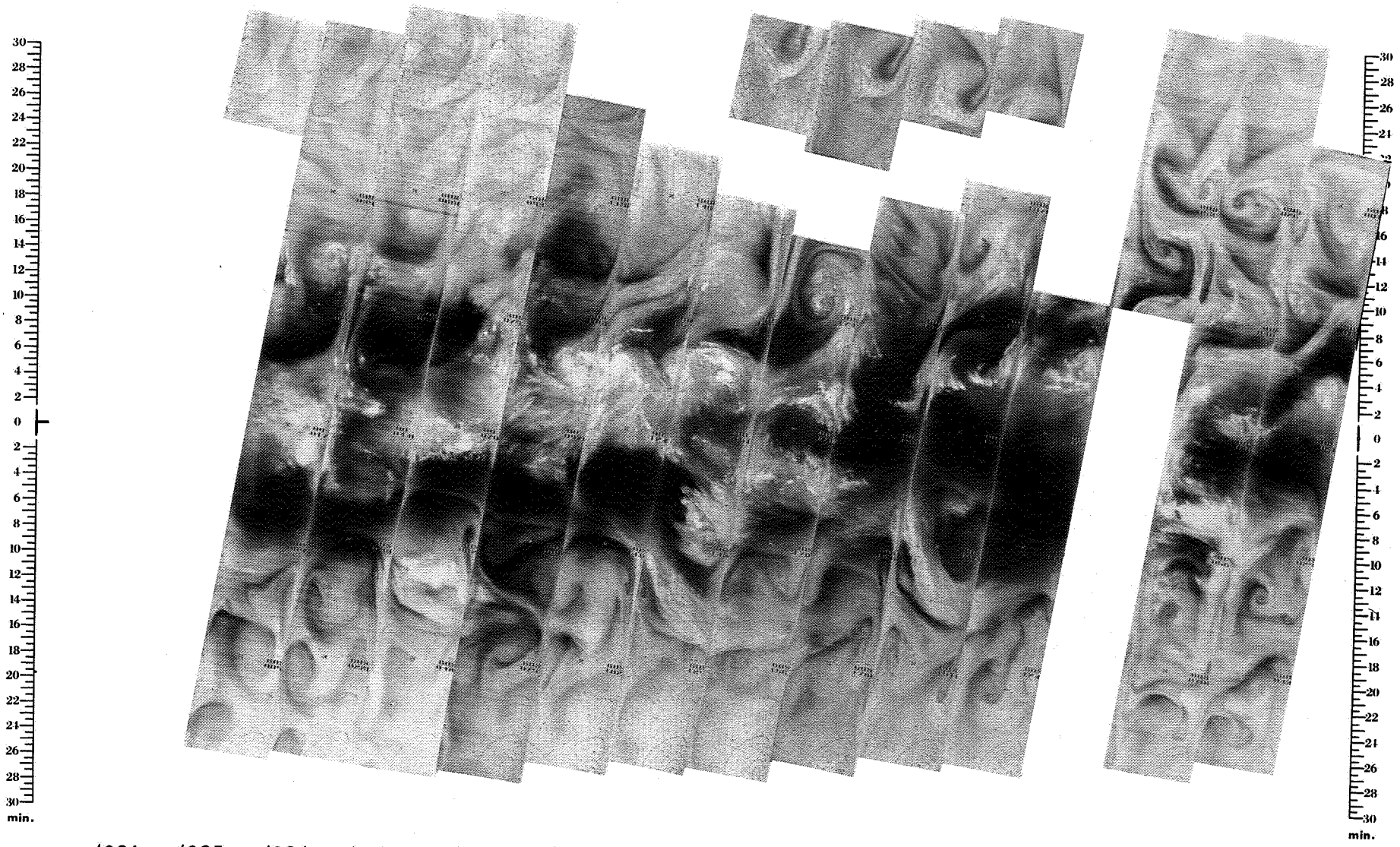


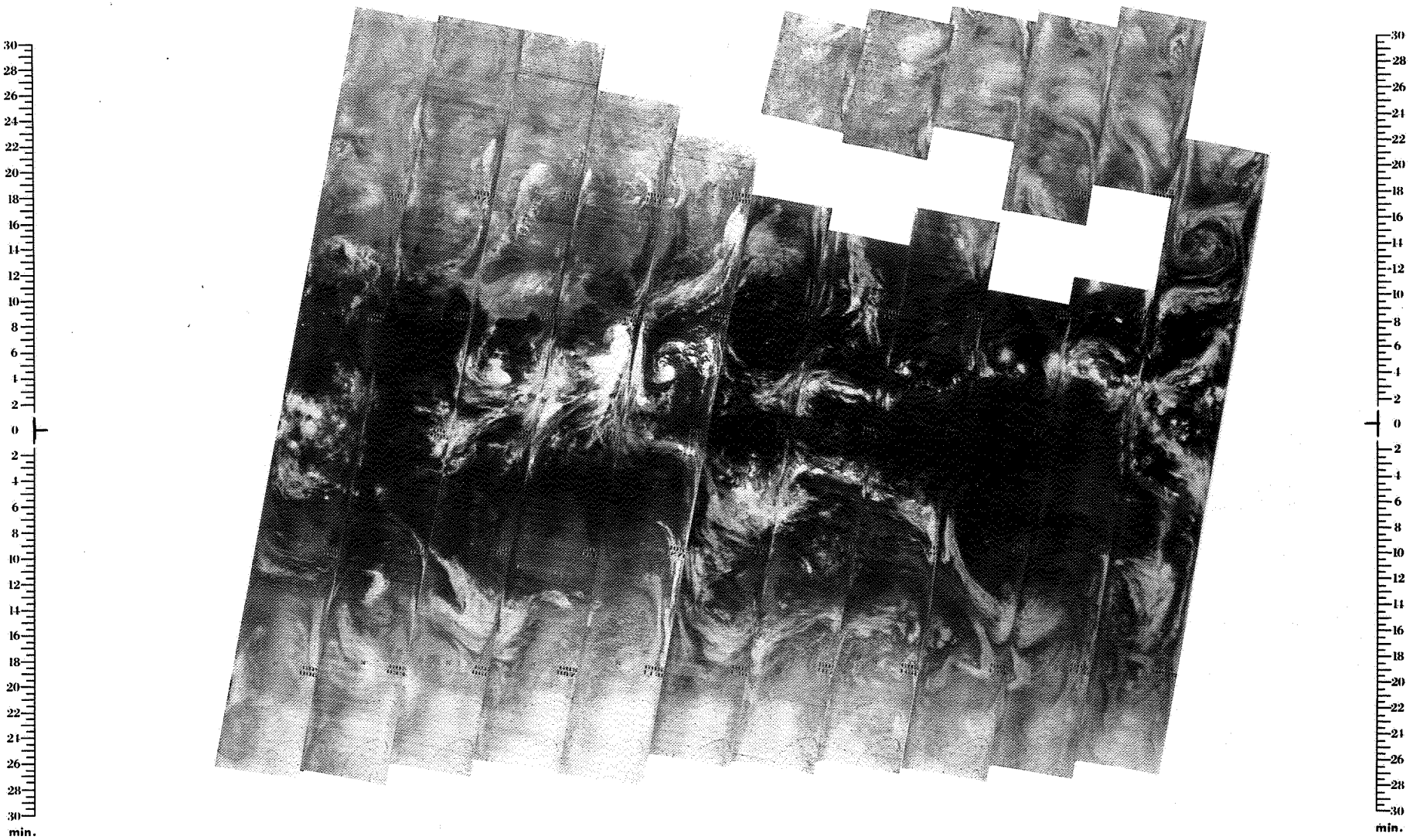
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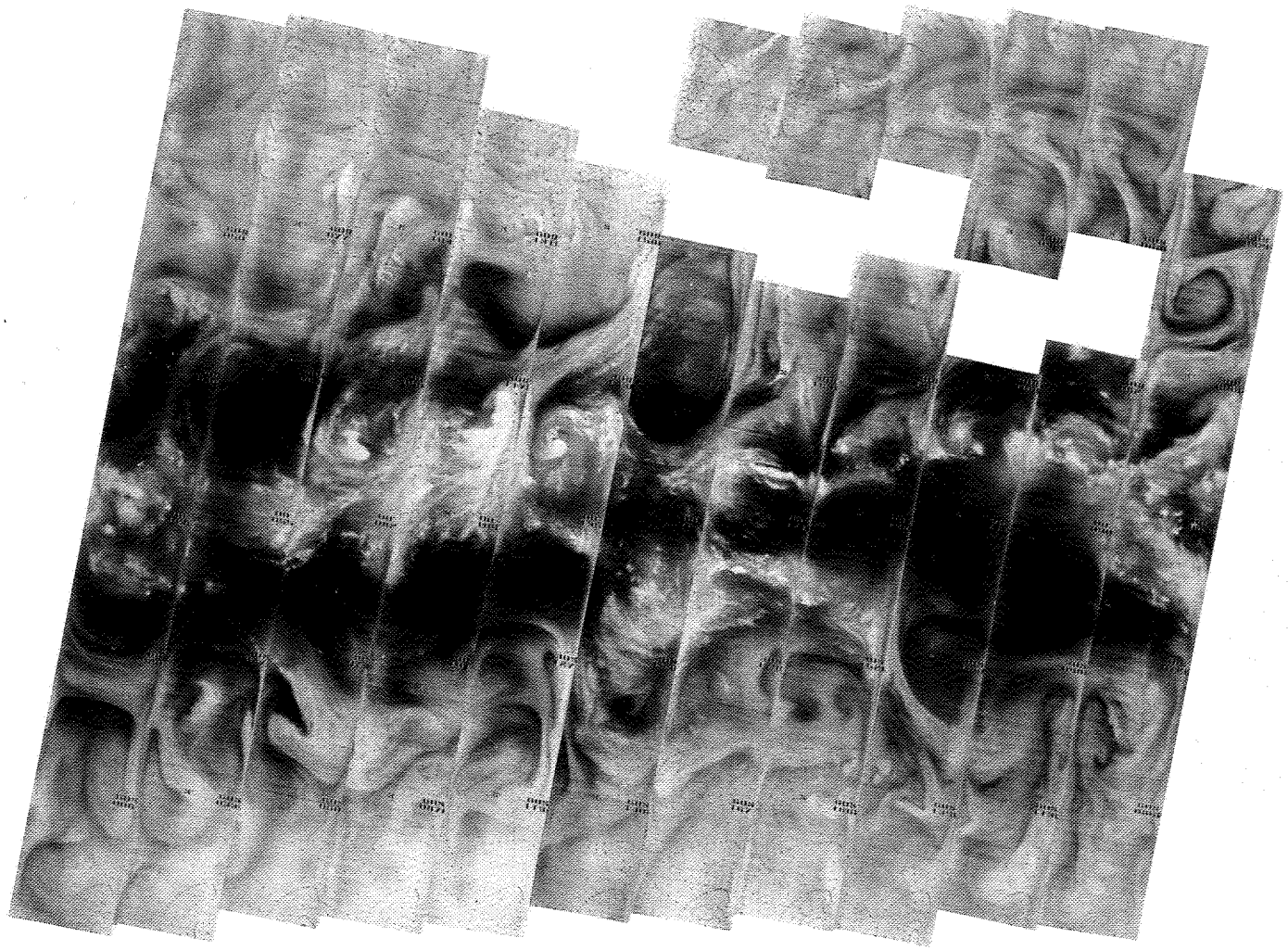
6 OCTOBER 1973

6.7 μm


min.
min.
4036
4035
4034
4033
4032
4031
4030
4029
4028
4027
4026
4025
4024
4023
7 OCTOBER 1973
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4036 4035 4034 4033 4032 4031 4030 4029 4028 4027 4026 4025 4024 4023
7 OCTOBER 1973
6.7 μm

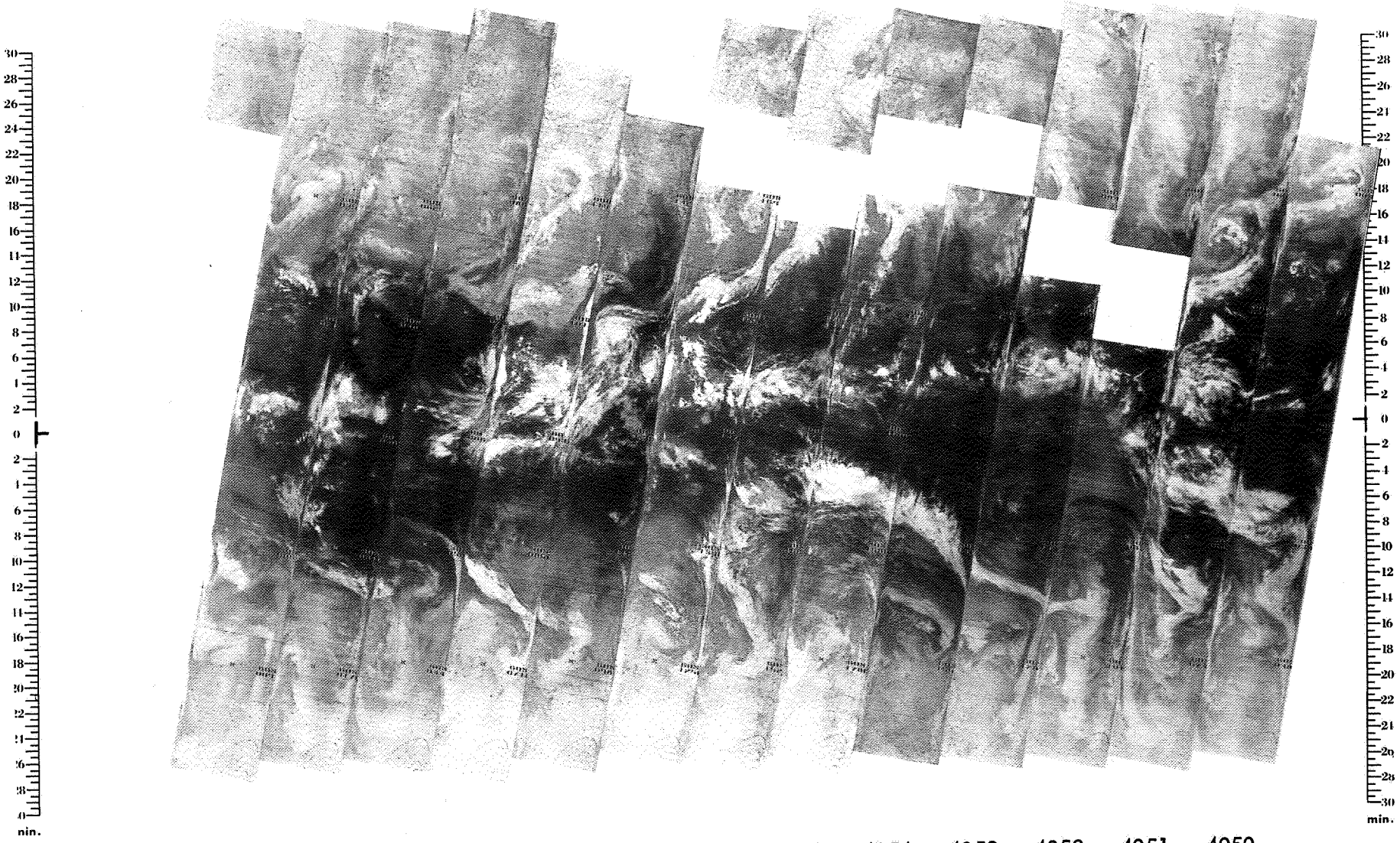

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4049 4048 4047 4046 4045 4044 4043 4042 4041 4040 4039 4038 4037
8 OCTOBER 1973
11.5 μm

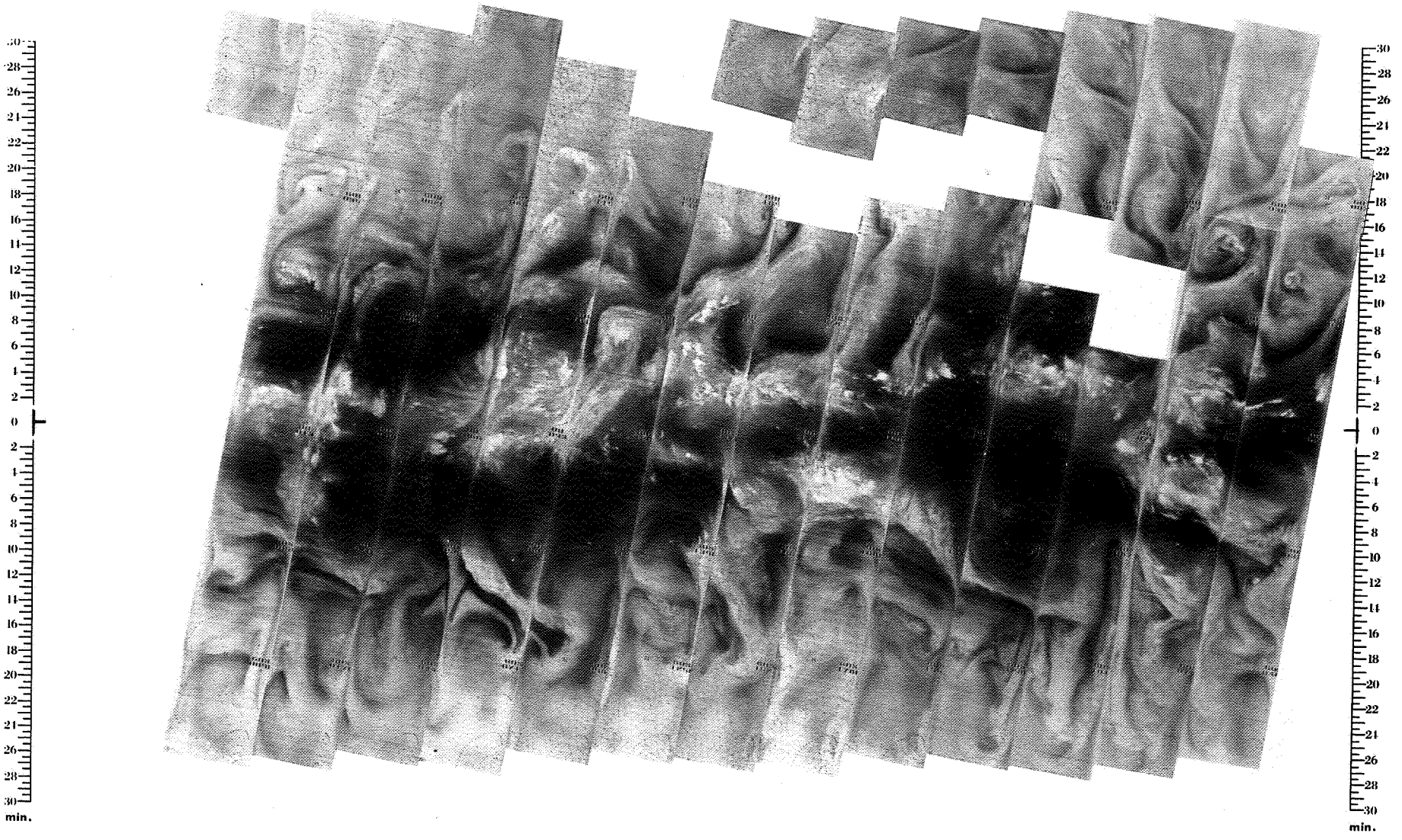


4049 4048 4047 4046 4045 4044 4043 4042 4041 4040 4039 4038 4037

8 OCTOBER 1973

6.7 μm

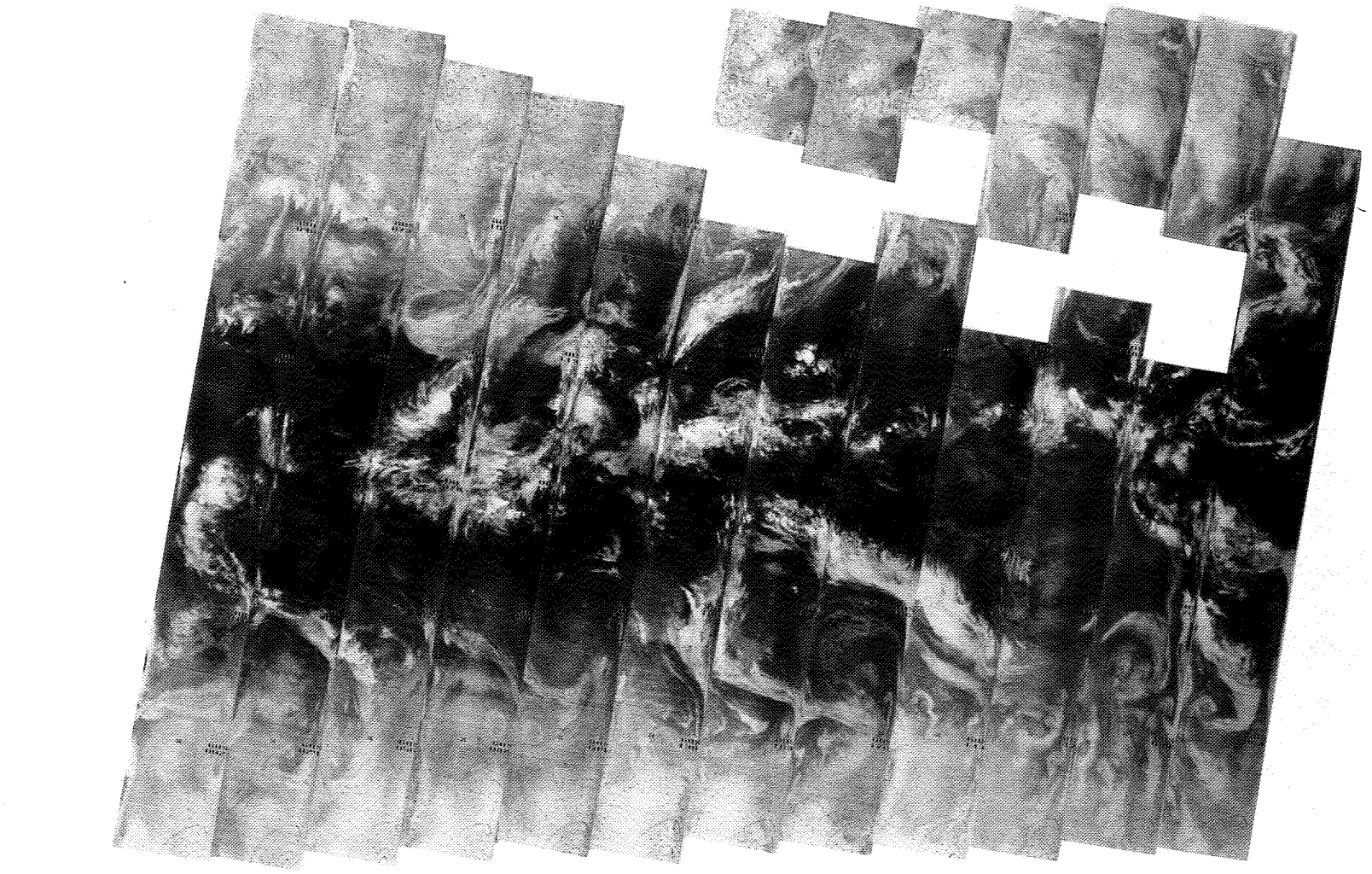

4063
4062
4061
4060
4059
4058
4057
4056
4055
4054
4053
4052
4051
4050
9 OCTOBER 1973
11.5 μm
min.
min.



4063 4062 4061 4060 4059 4058 4057 4056 4055 4054 4053 4052 4051 4050

9 OCTOBER 1973

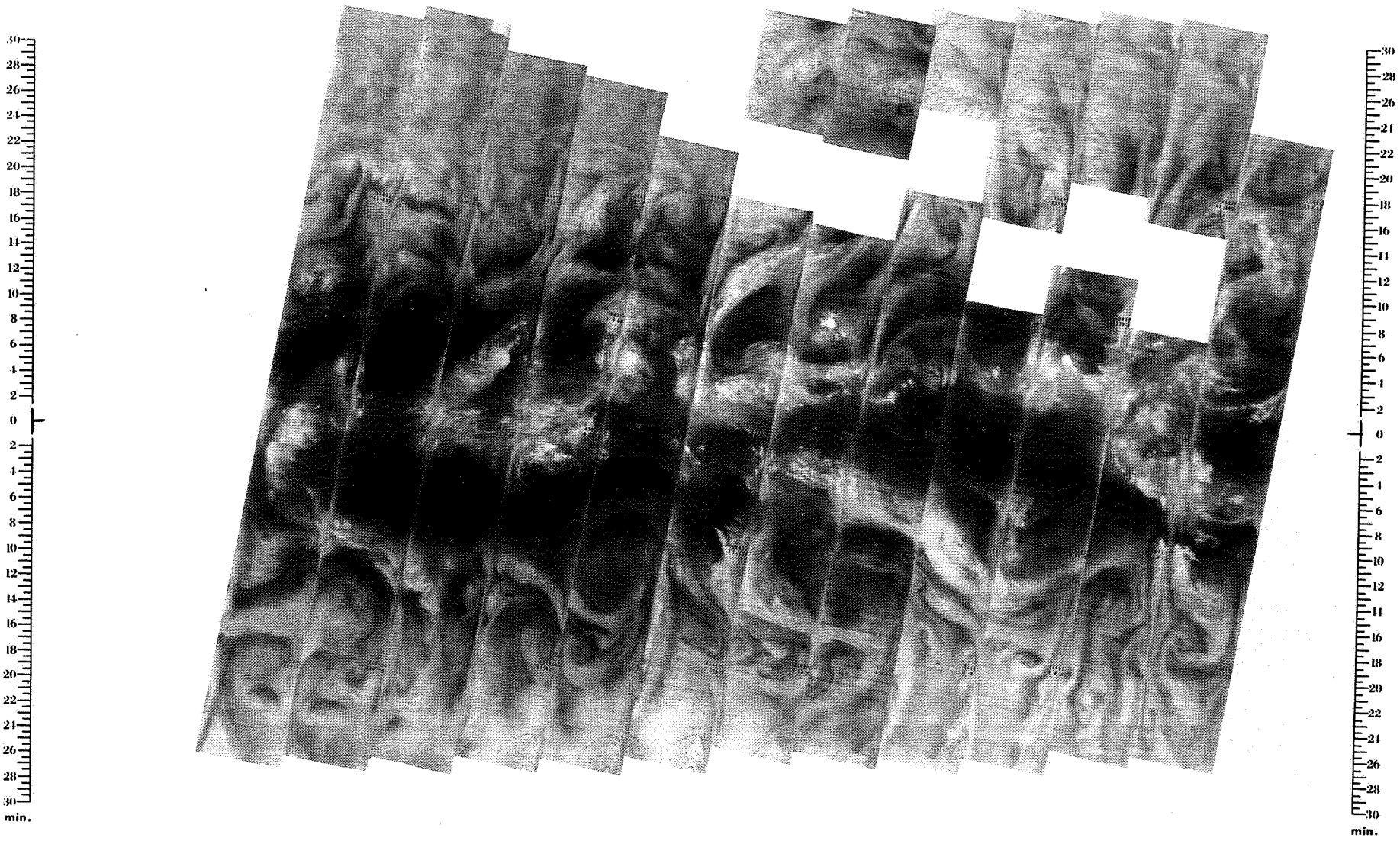
6.7 μm

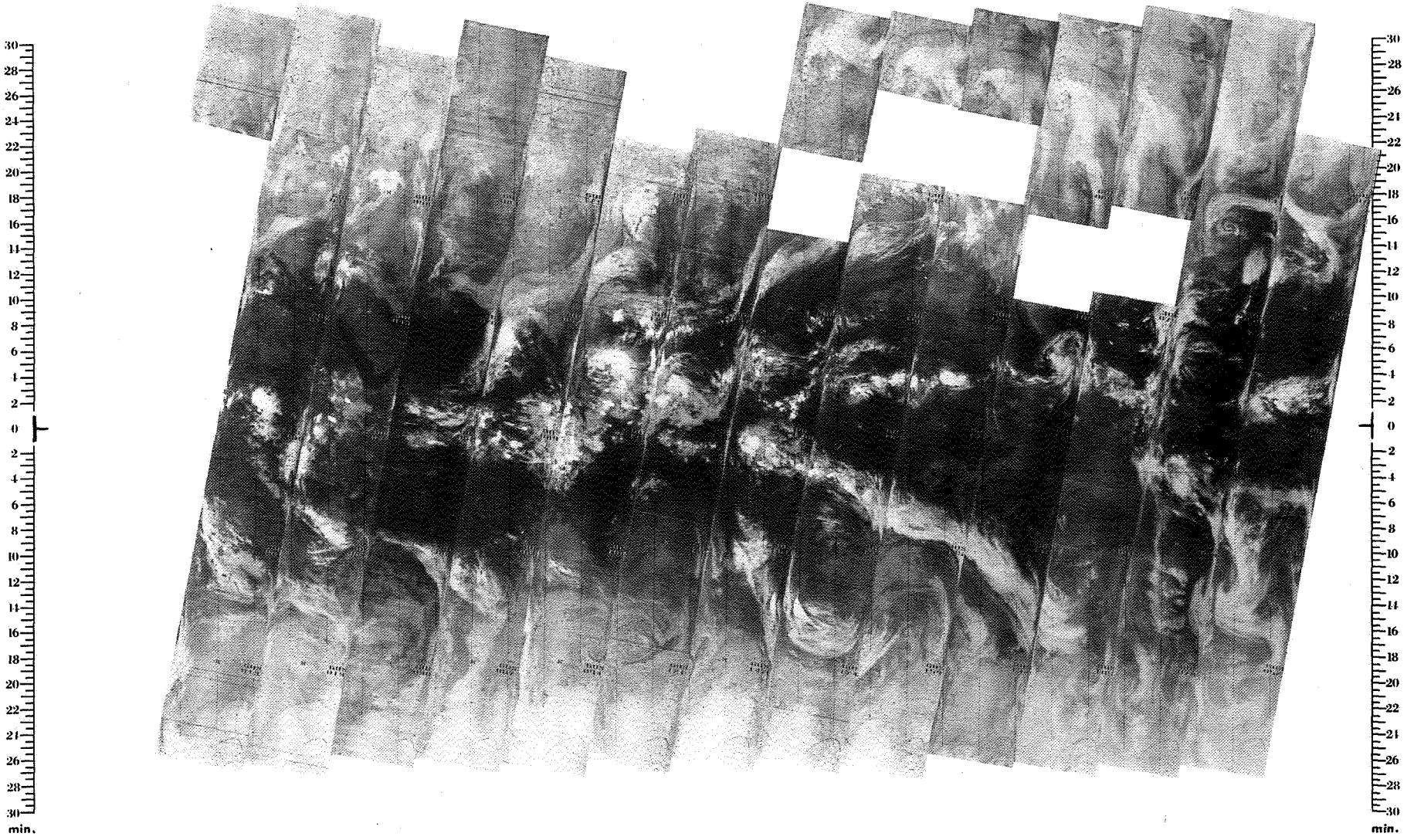


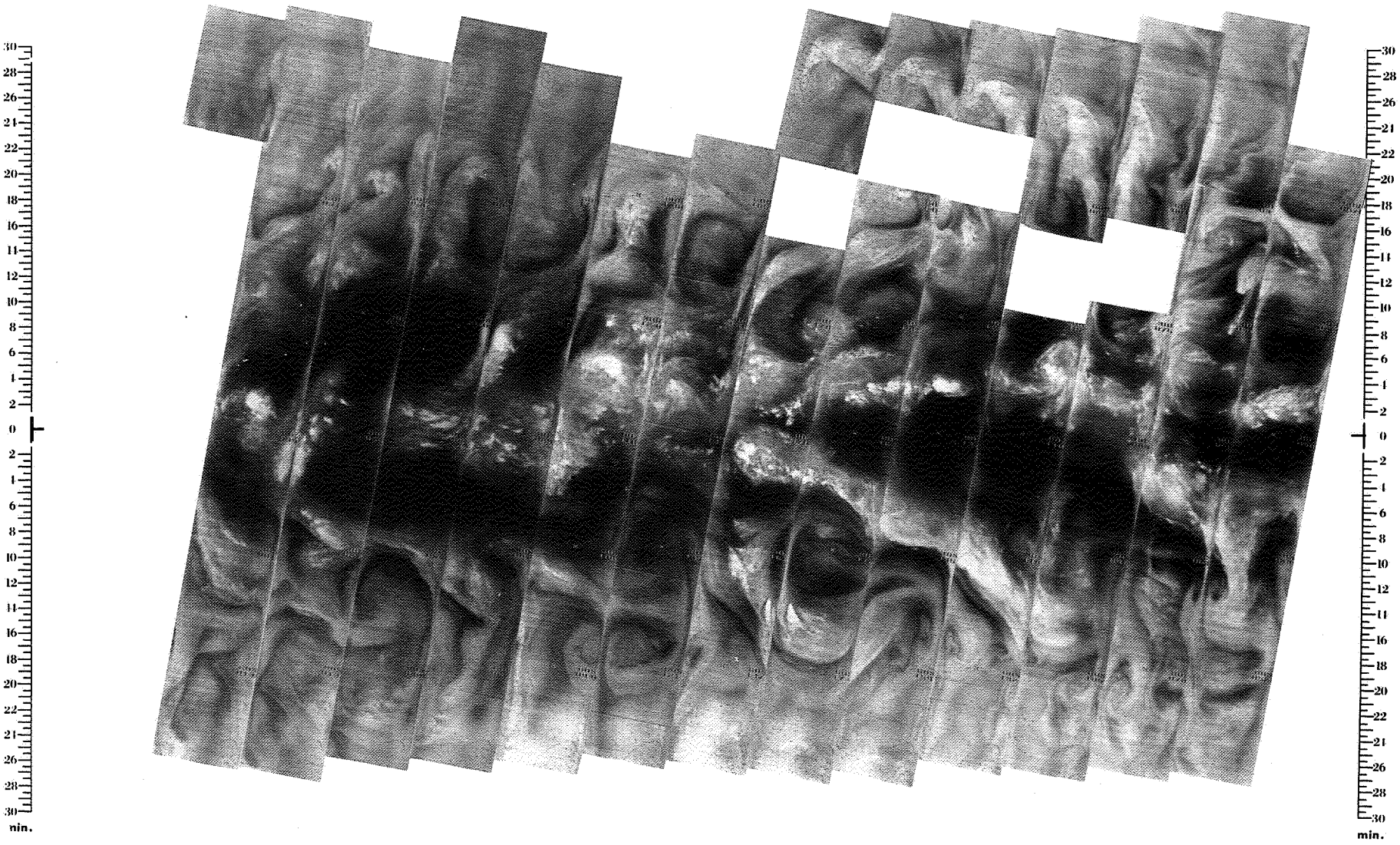
4076 4075 4074 4073 4072 4071 4070 4069 4068 4067 4066 4065 4064

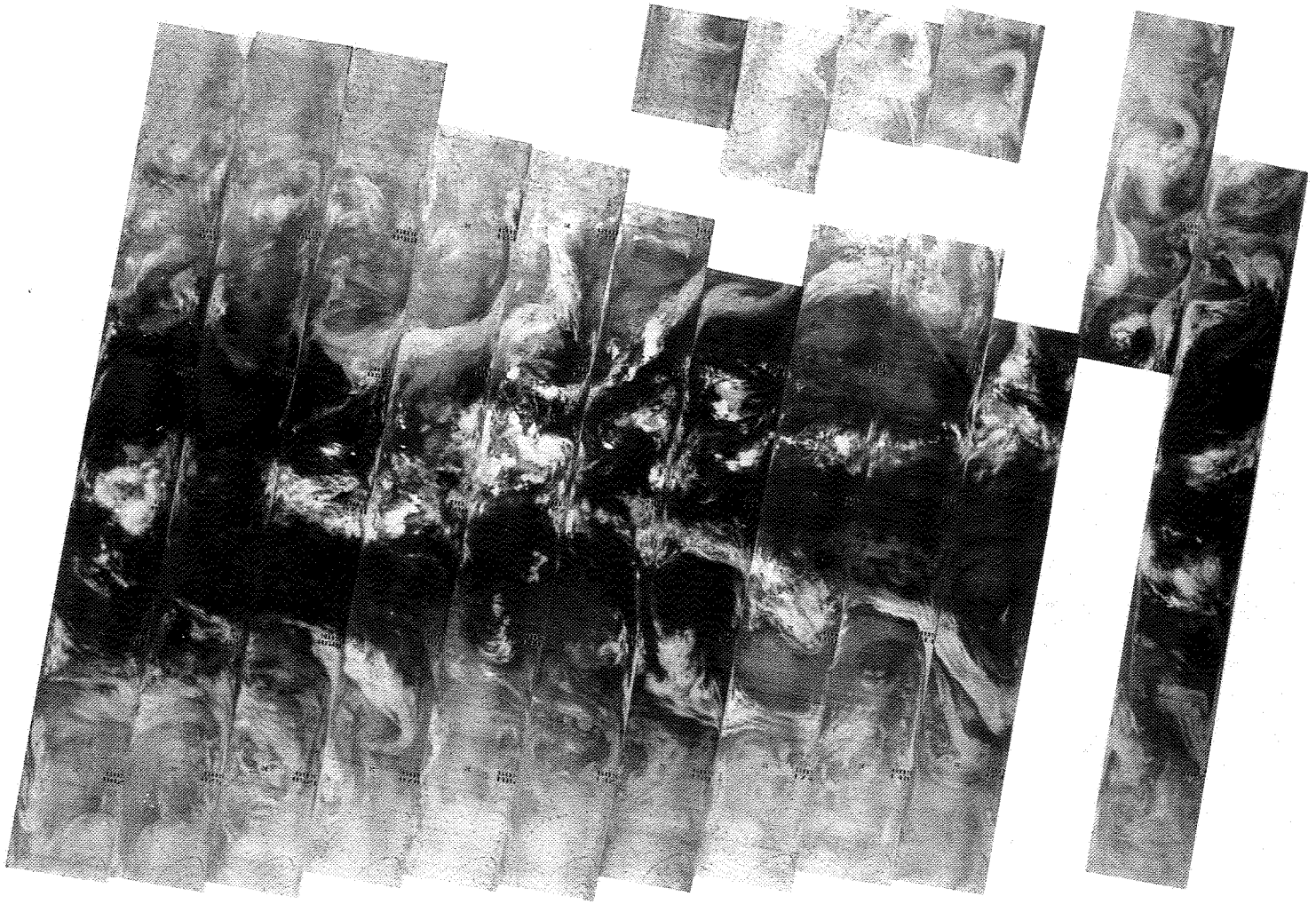
10 OCTOBER 1973

11.5 μm


min.
min.
4076 4075 4074 4073 4072 4071 4070 4069 4068 4067 4066 4065 4064
10 OCTOBER 1973
6.7 μm


min.
min.
4090 4089 4088 4087 4086 4085 4084 4083 4082 4081 4080 4079 4078 4077
11 OCTOBER 1973
11.5 μm


min.
min.
4090 4089 4088 4087 4086 4085 4084 4083 4082 4081 4080 4079 4078 4077
11 OCTOBER 1973
6.7 μm

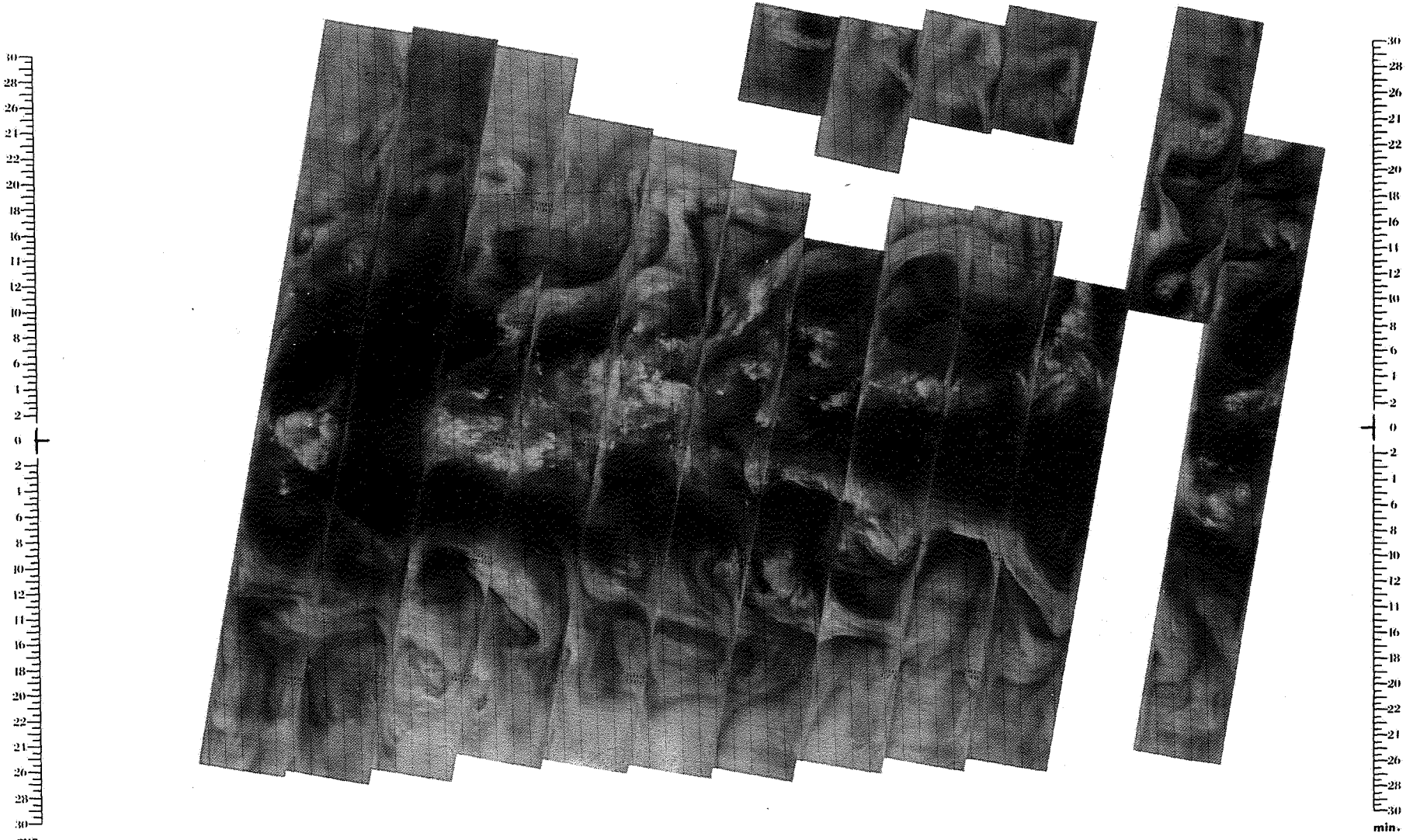


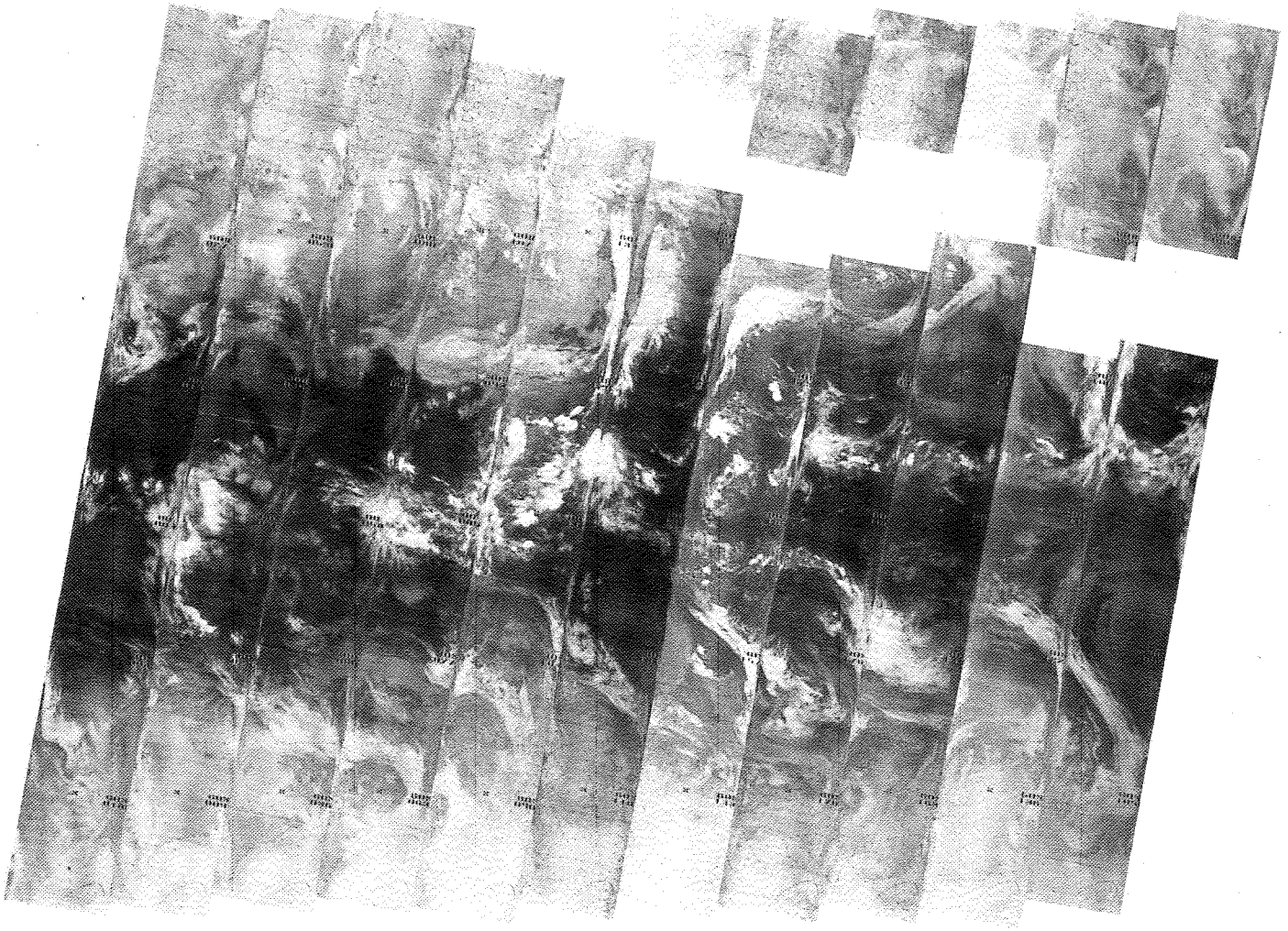
4103 4102 4101 4100 4099 4098 4097 4096 4095 4094 4093 4092 4091

12 OCTOBER 1973

11.5 μm

4-26

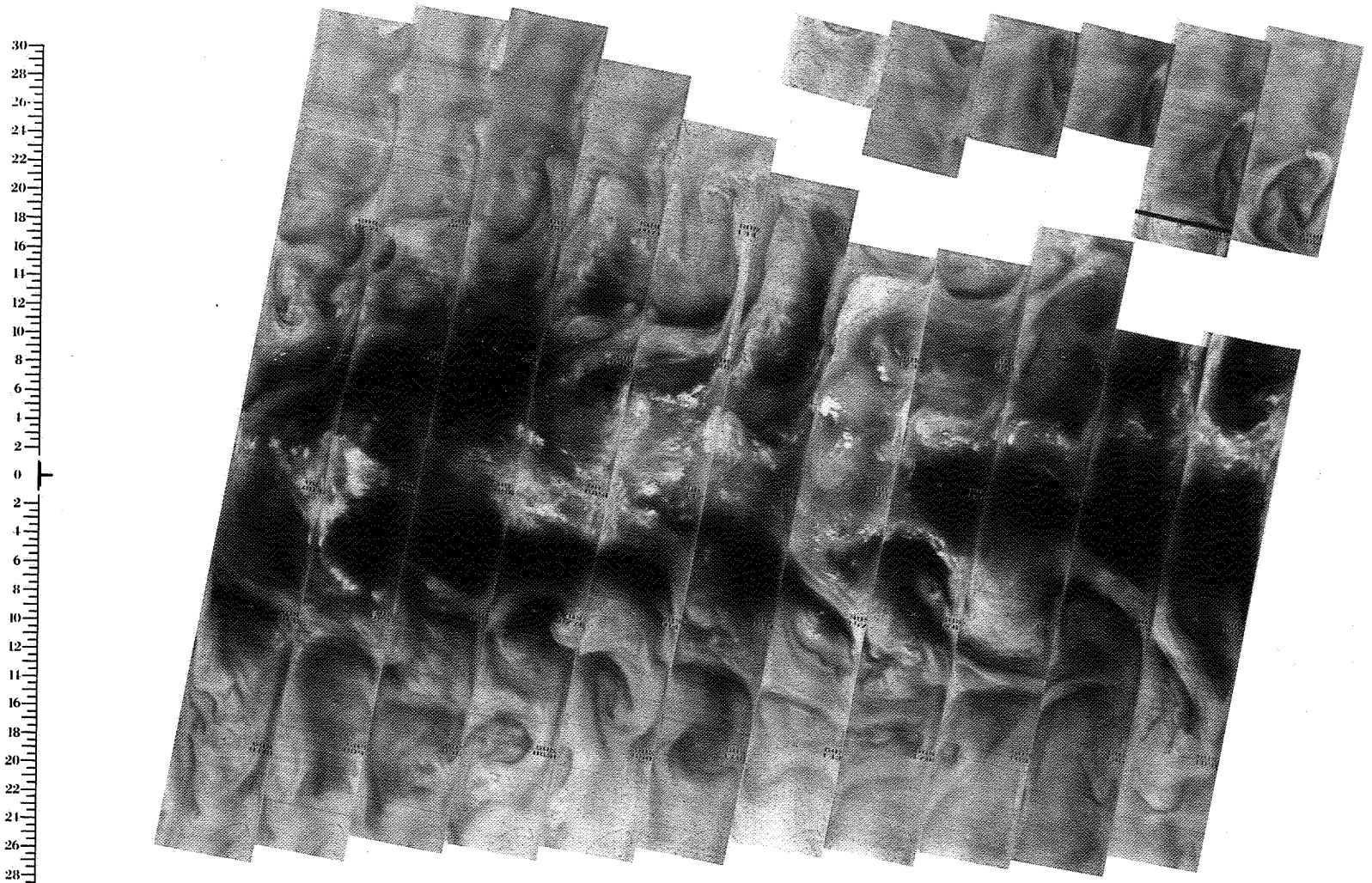

4103 4102 4101 4100 4099 4098 4097 4096 4095 4094 4093 4092 4091
12 OCTOBER 1973
6.7 μm
min.



4116 4115 4114 4113 4112 4111 4110 4109 4108 4107 4106 4105 4104

13 OCTOBER 1973

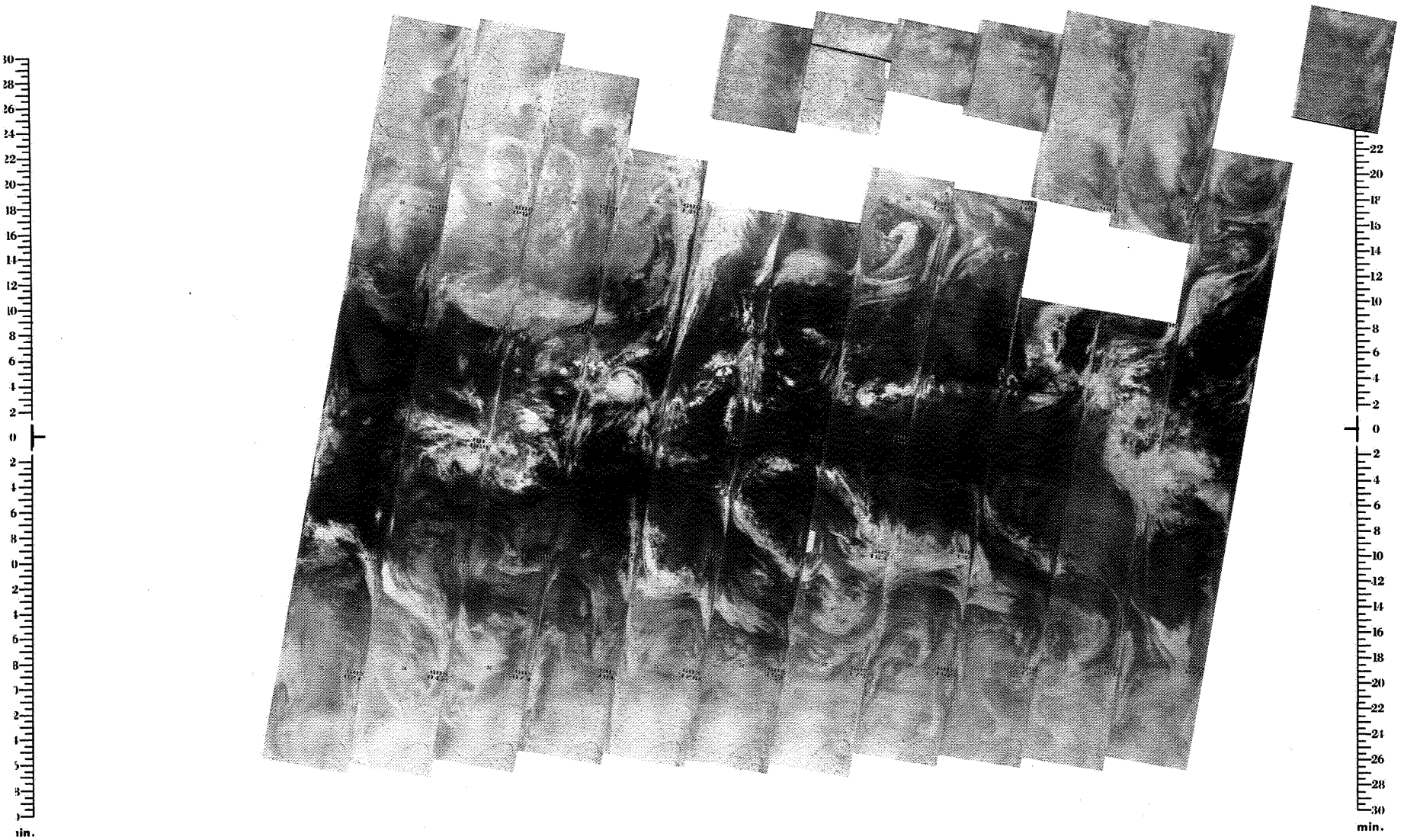
11.5 μm



4116 4115 4114 4113 4112 4111 4110 4109 4108 4107 4106 4105 4104

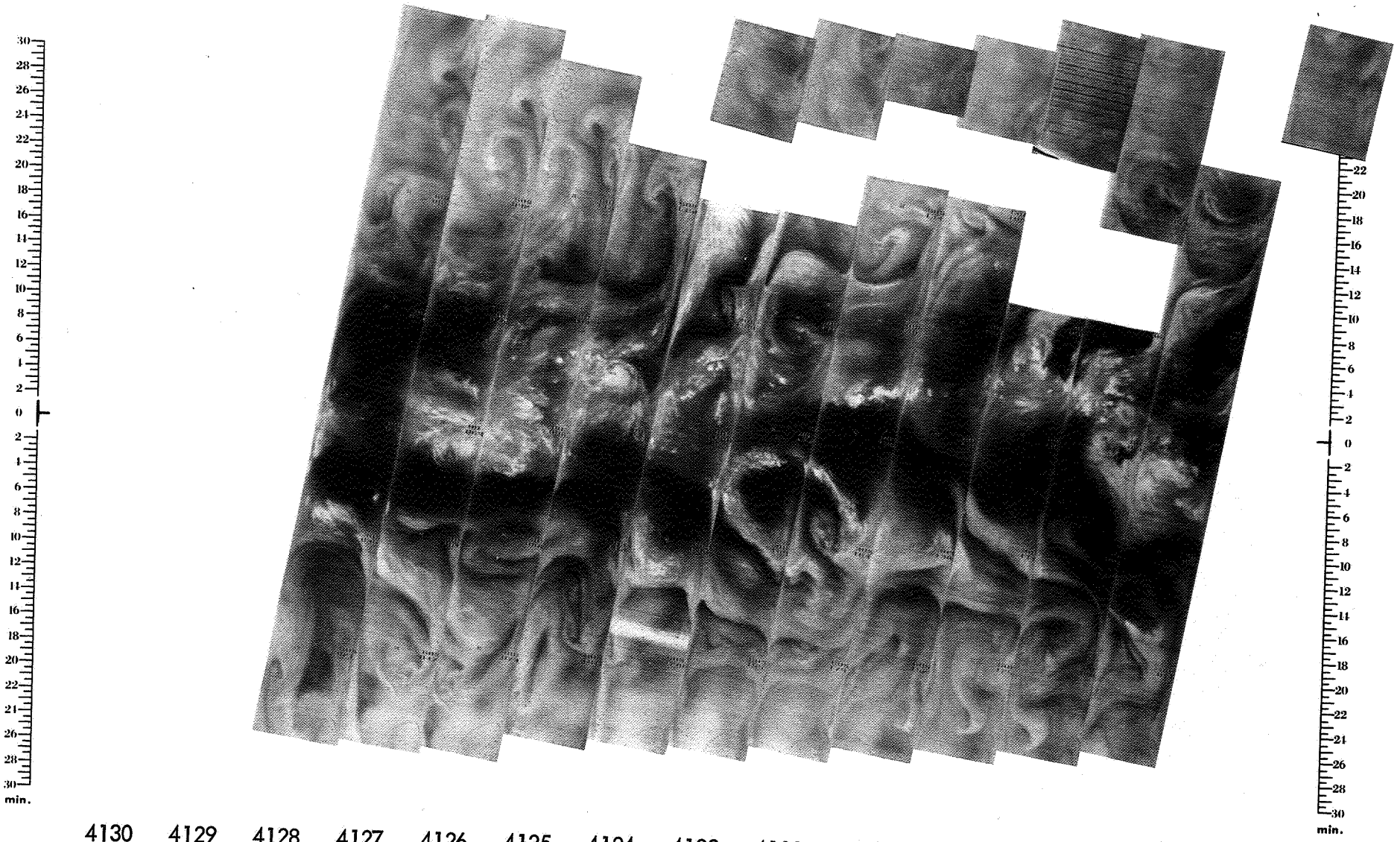
13 OCTOBER 1973

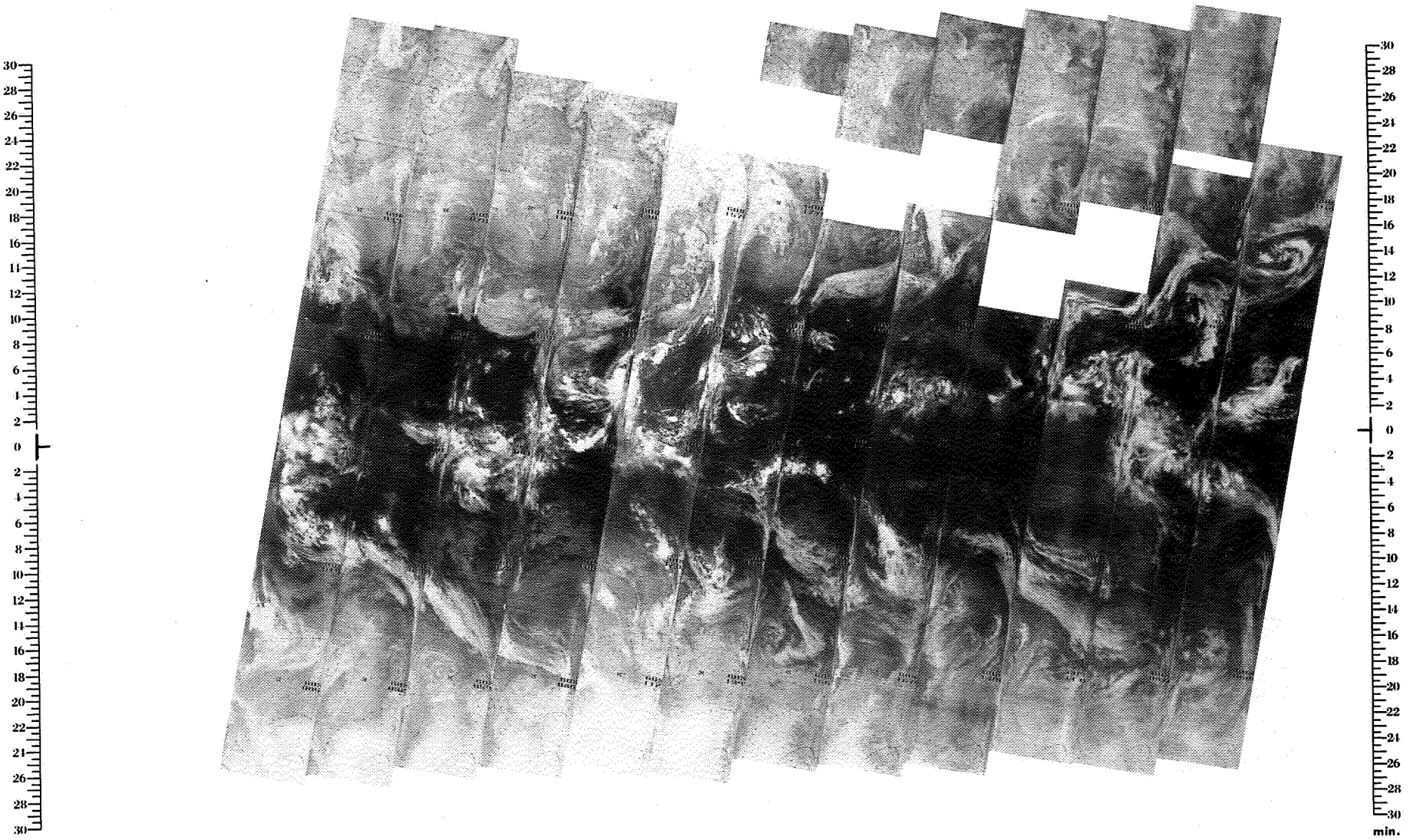
6.7 μm

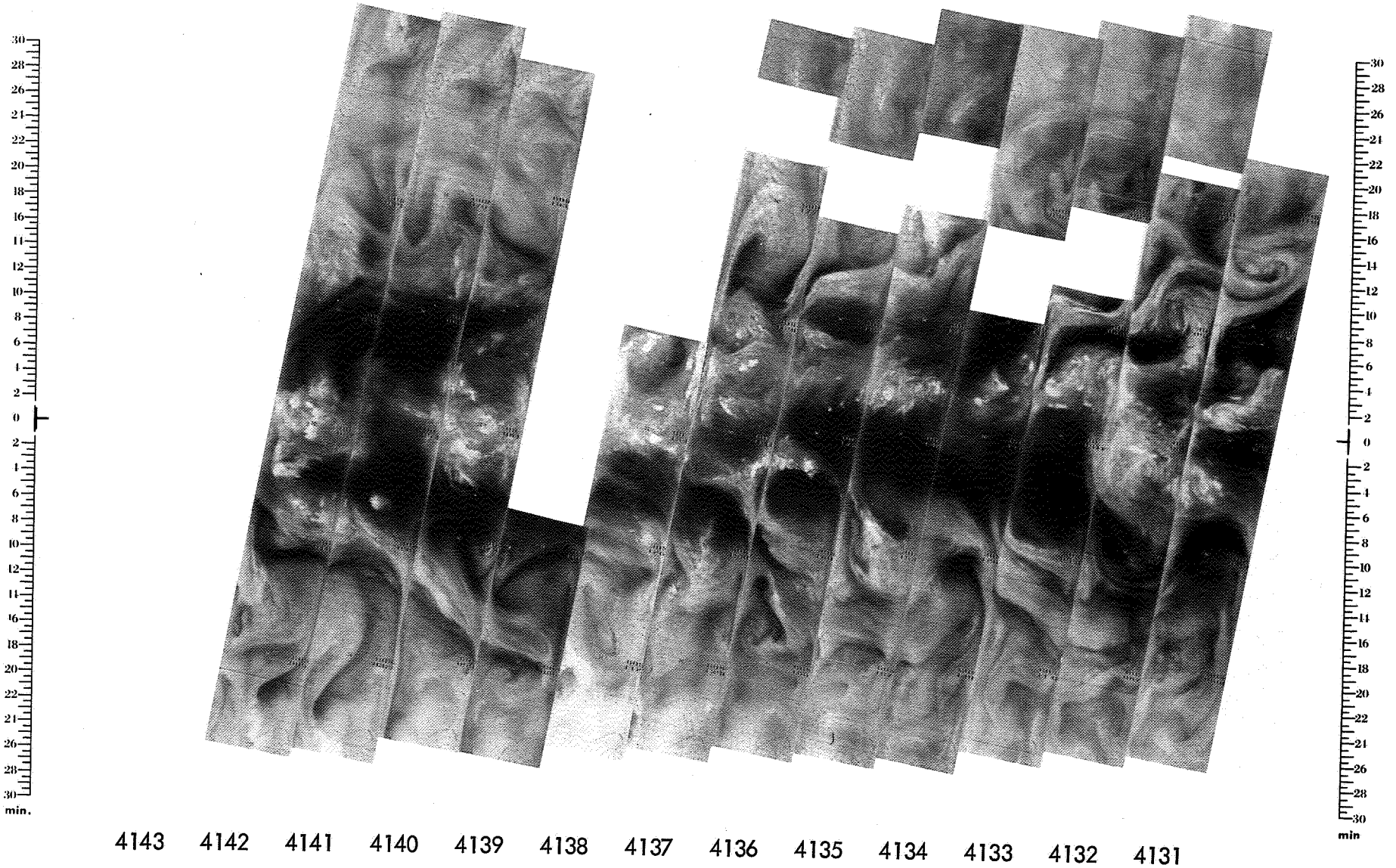


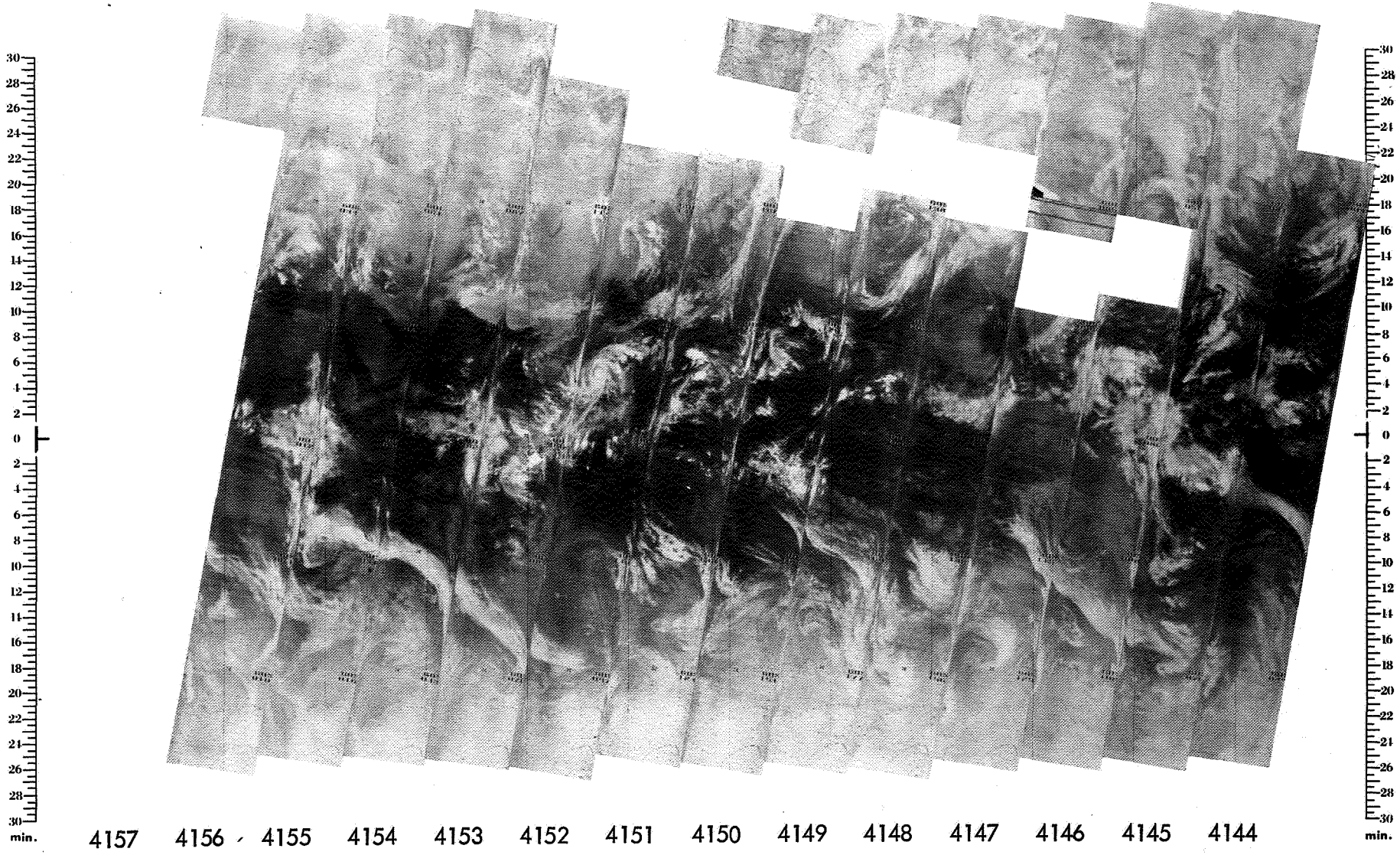
14 OCTOBER 1973

11.5 μm


min.
min.
4130 4129 4128 4127 4126 4125 4124 4123 4122 4121 4120 4119 4118 4117
14 OCTOBER 1973
6.7 μm

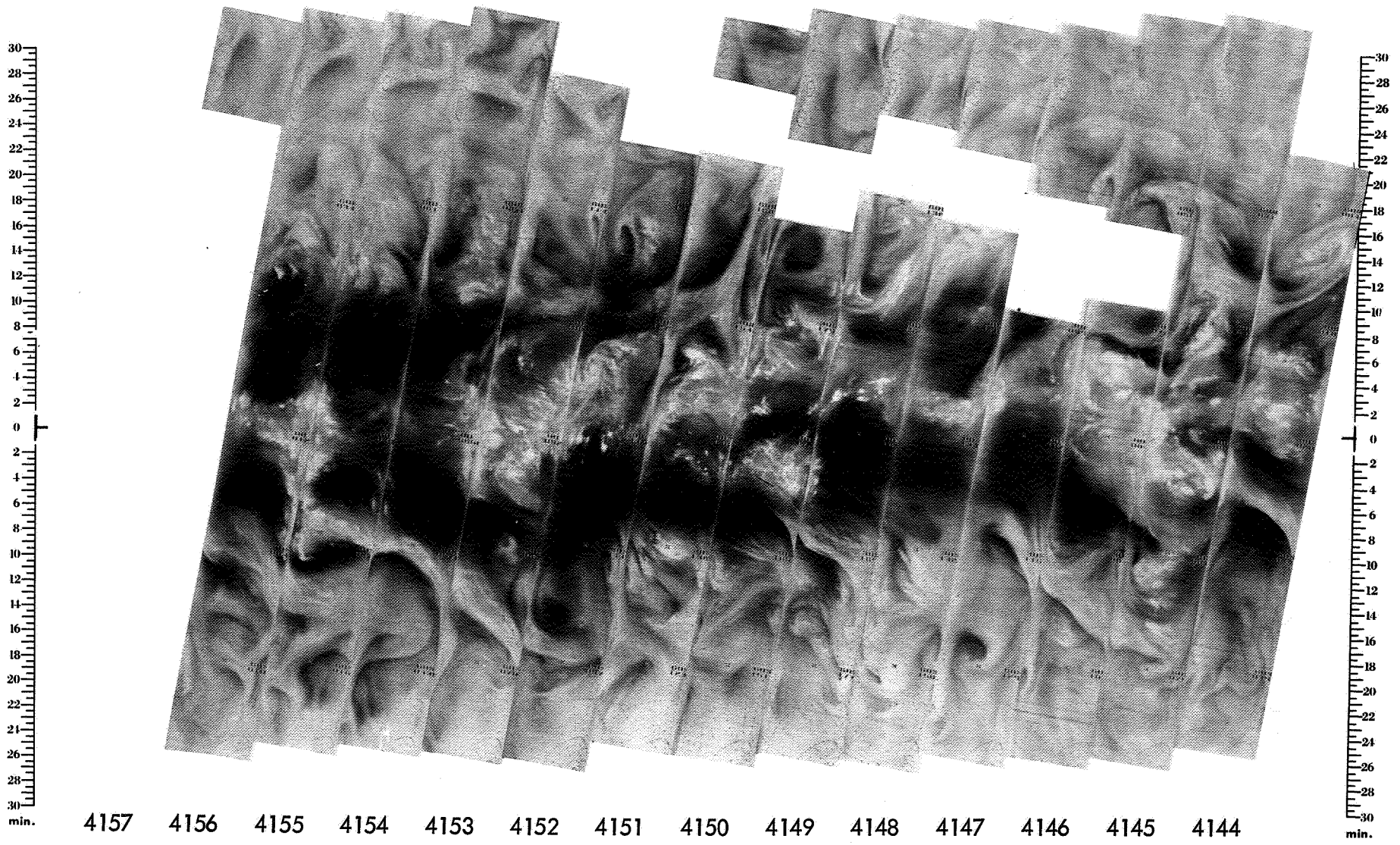

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4143 4142 4141 4140 4139 4138 4137 4136 4135 4134 4133 4132 4131
15 OCTOBER 1973
11.5 μm


min.
min
4143 4142 4141 4140 4139 4138 4137 4136 4135 4134 4133 4132 4131
15 OCTOBER 1973
6.7 μm



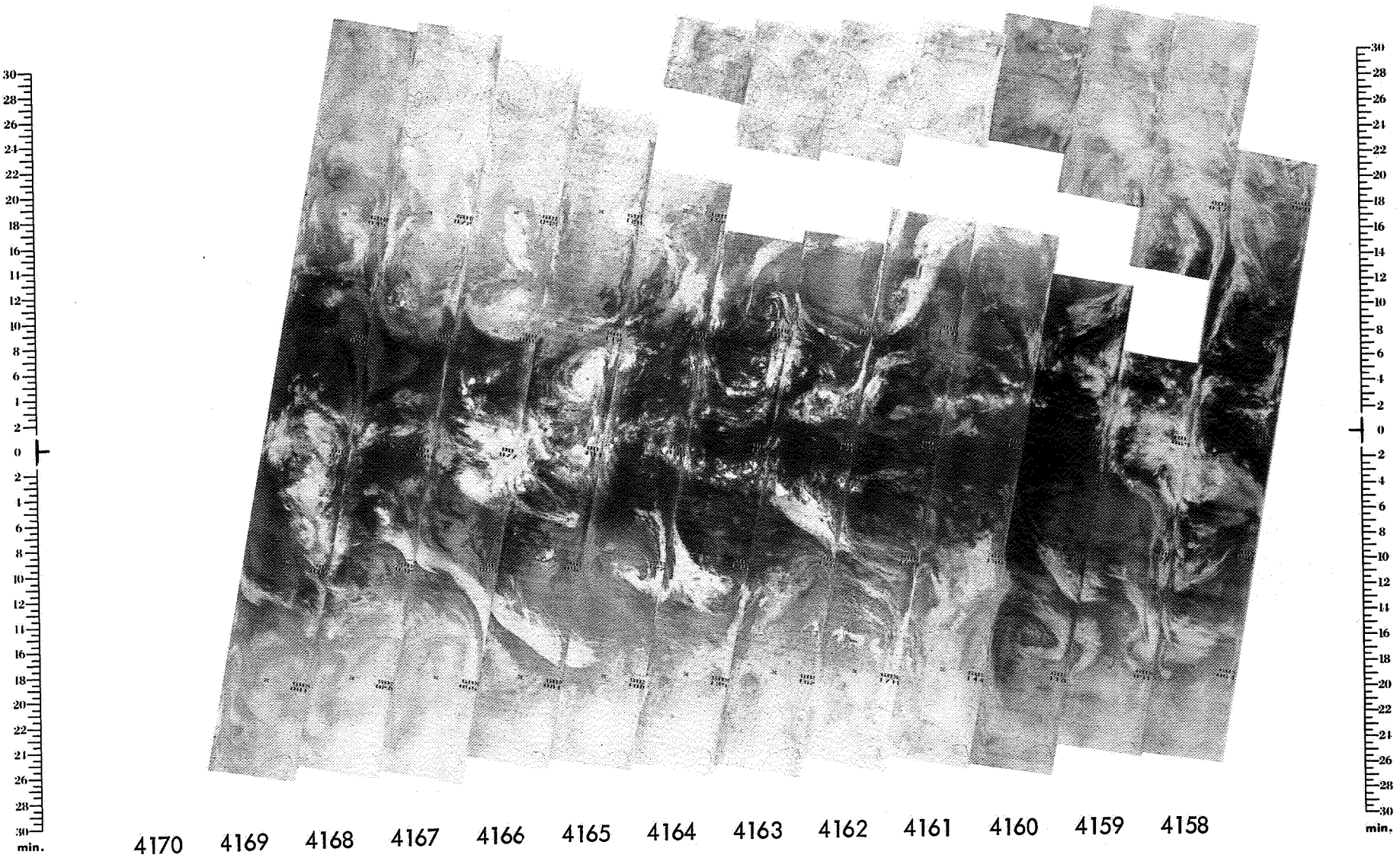
16 OCTOBER 1973

11.5 μm



16 OCTOBER 1973

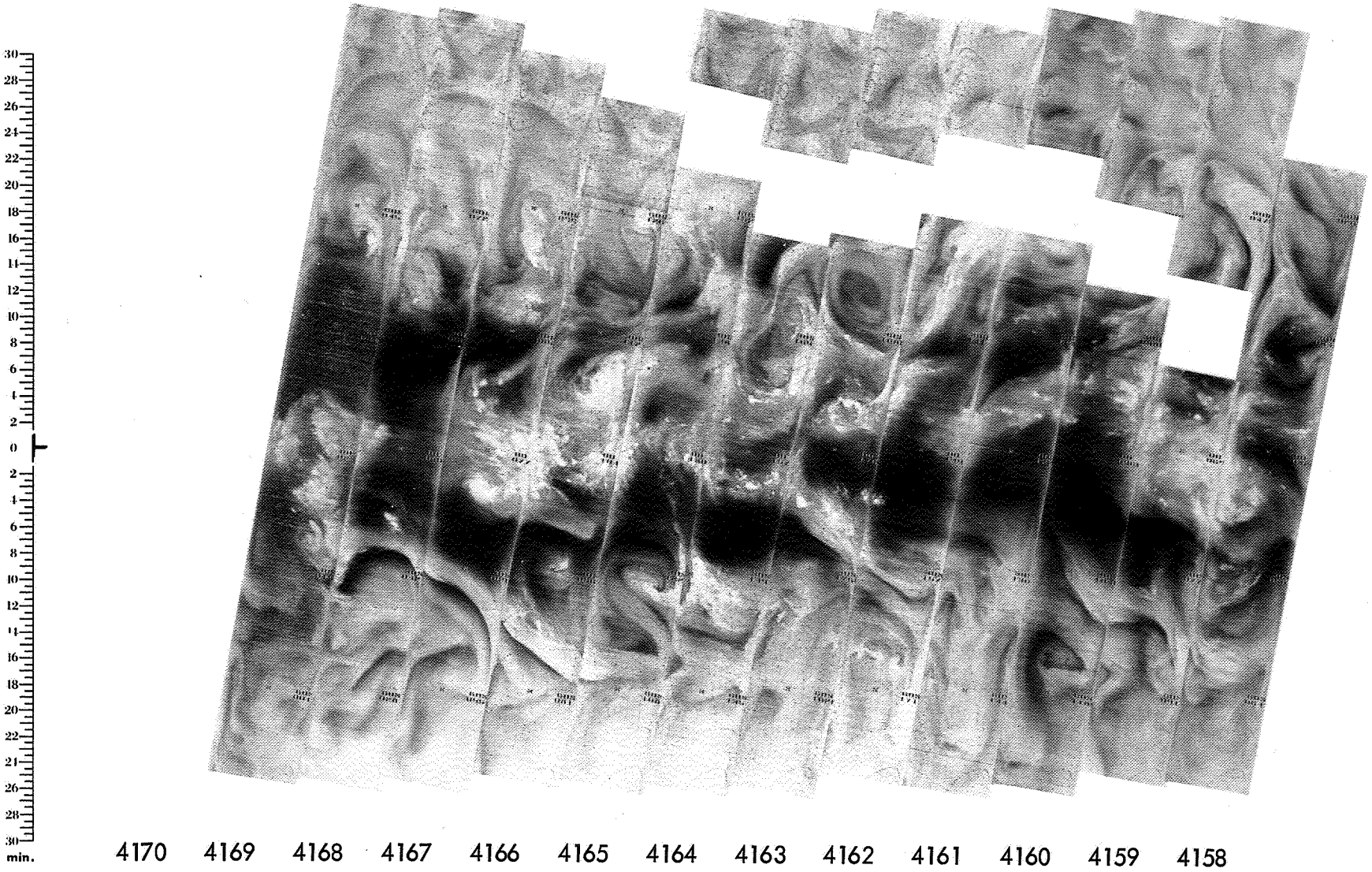
6.7 μm



4170 4169 4168 4167 4166 4165 4164 4163 4162 4161 4160 4159 4158

17 OCTOBER 1973

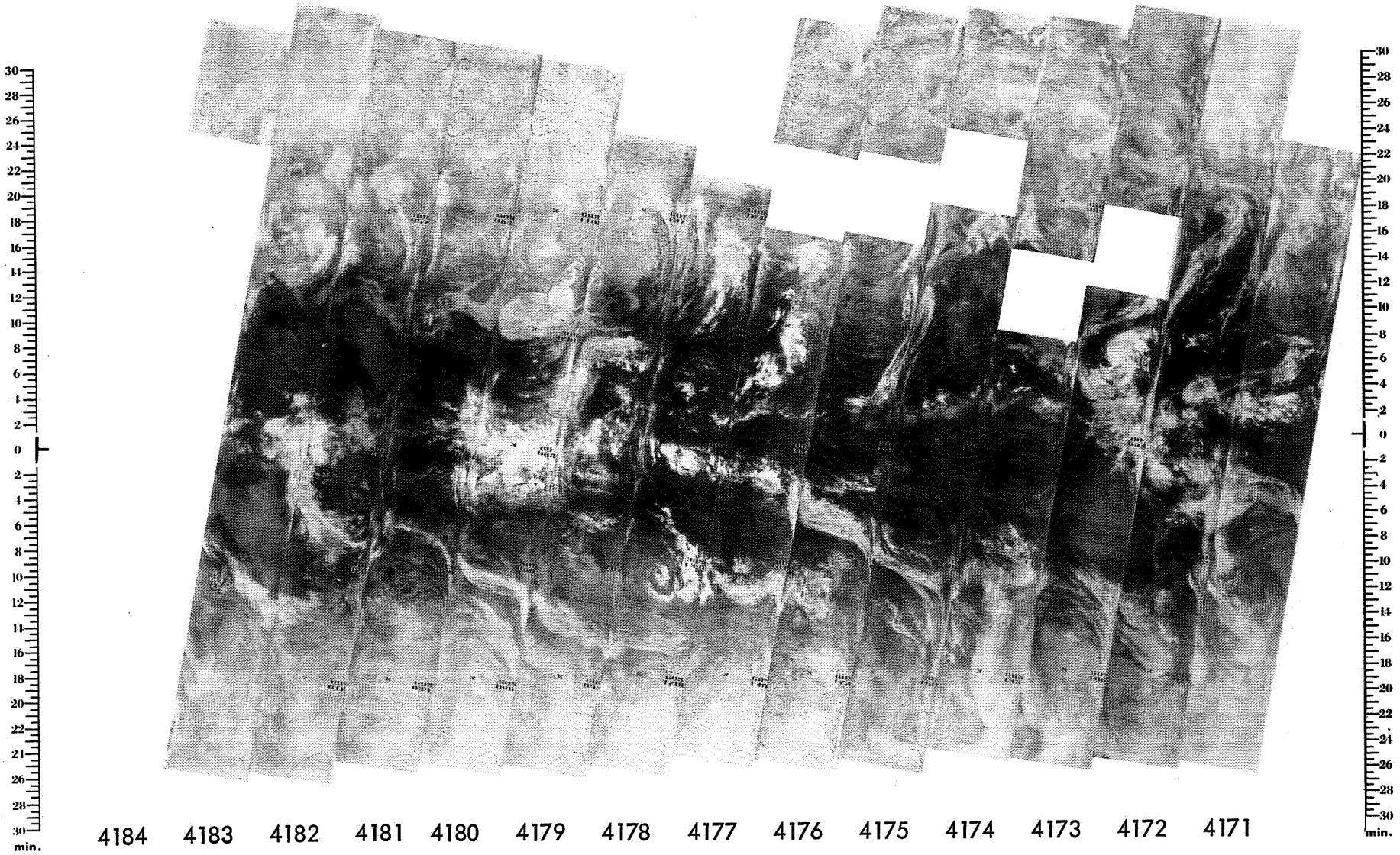
11.5 μm



4170 4169 4168 4167 4166 4165 4164 4163 4162 4161 4160 4159 4158

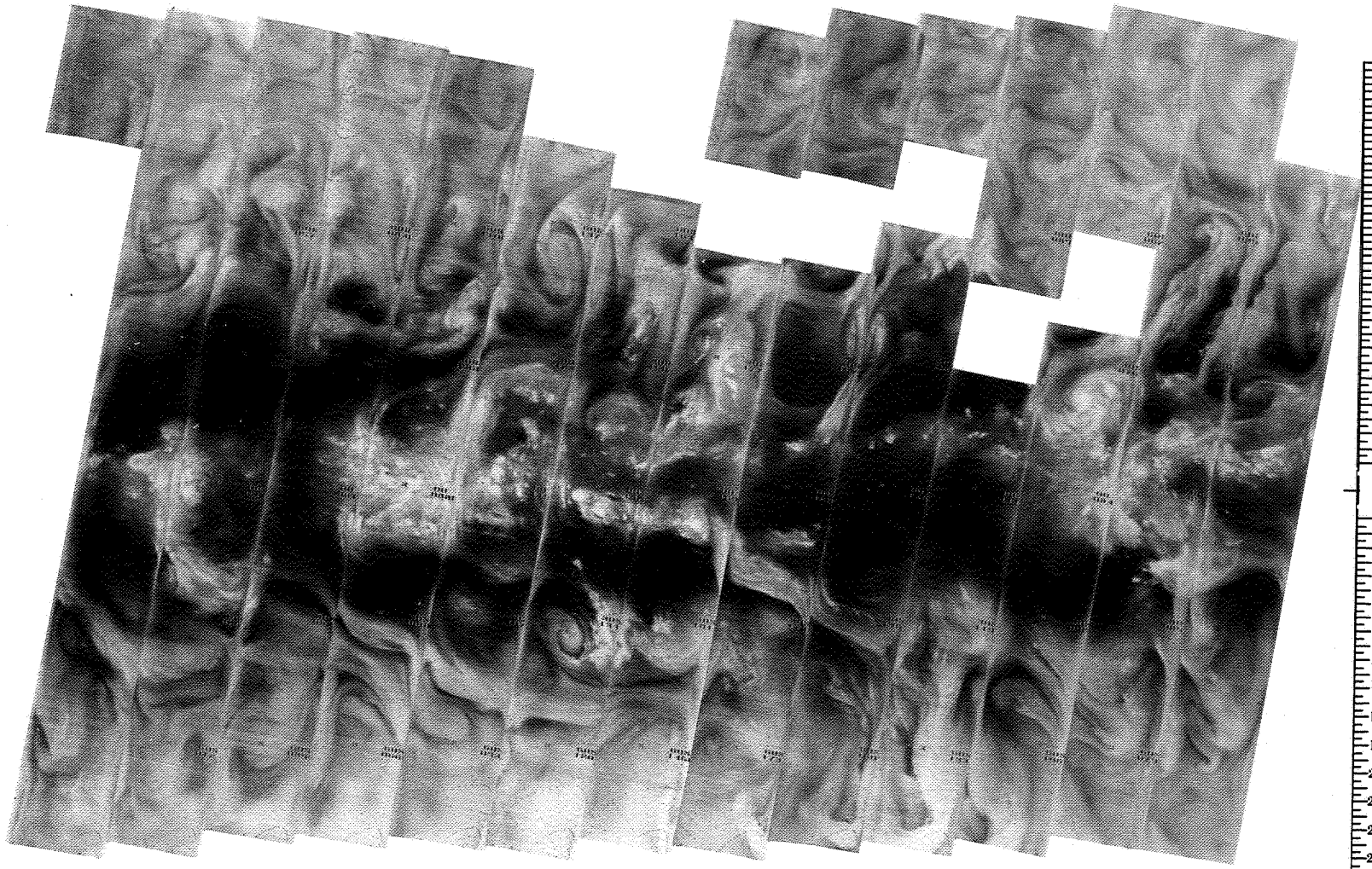
17 OCTOBER 1973

6.7 μm



18 OCTOBER 1973

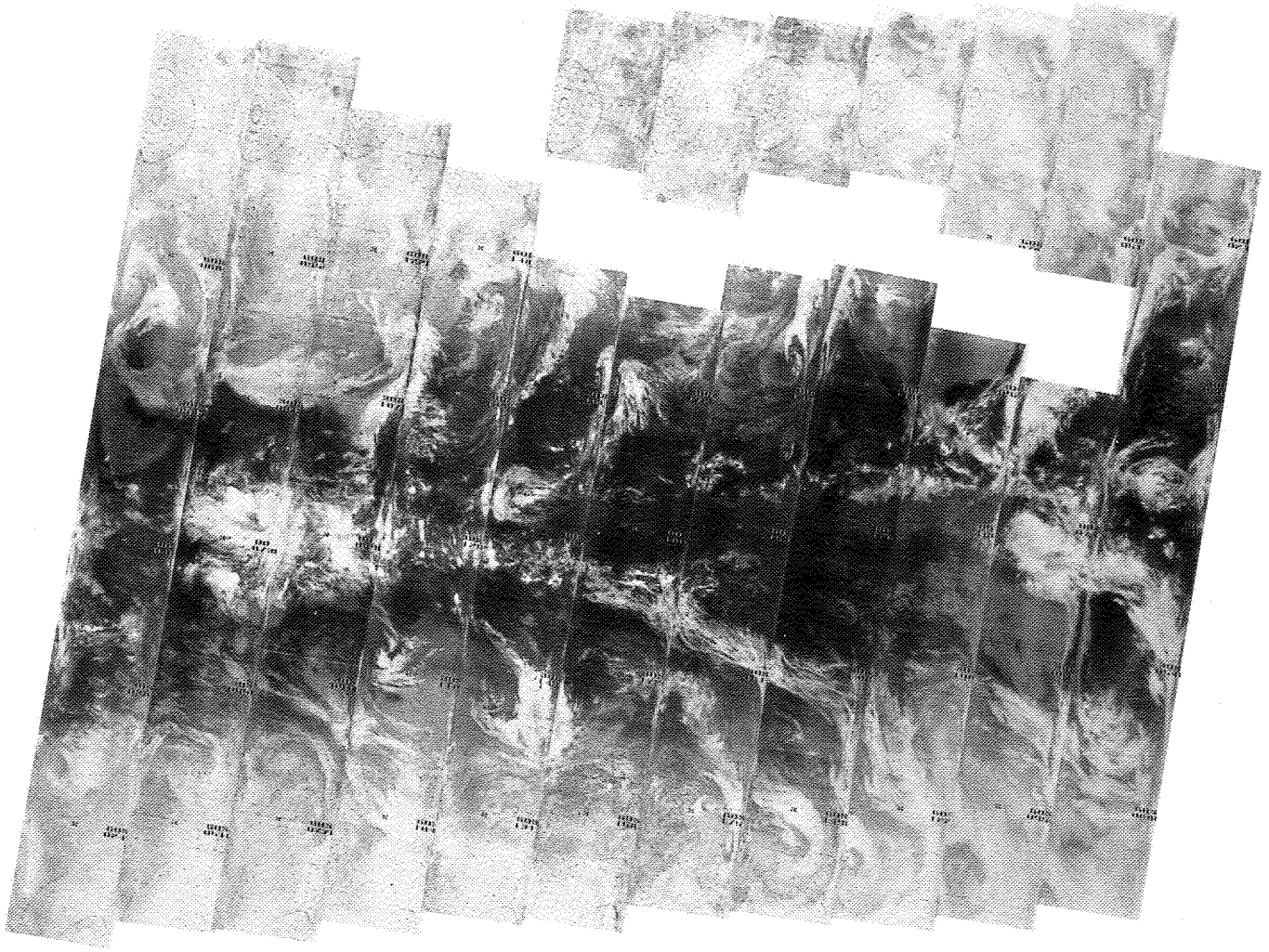
11.5 μm



4184 4183 4182 4181 4180 4179 4178 4177 4176 4175 4174 4173 4172 4171

18 OCTOBER 1973

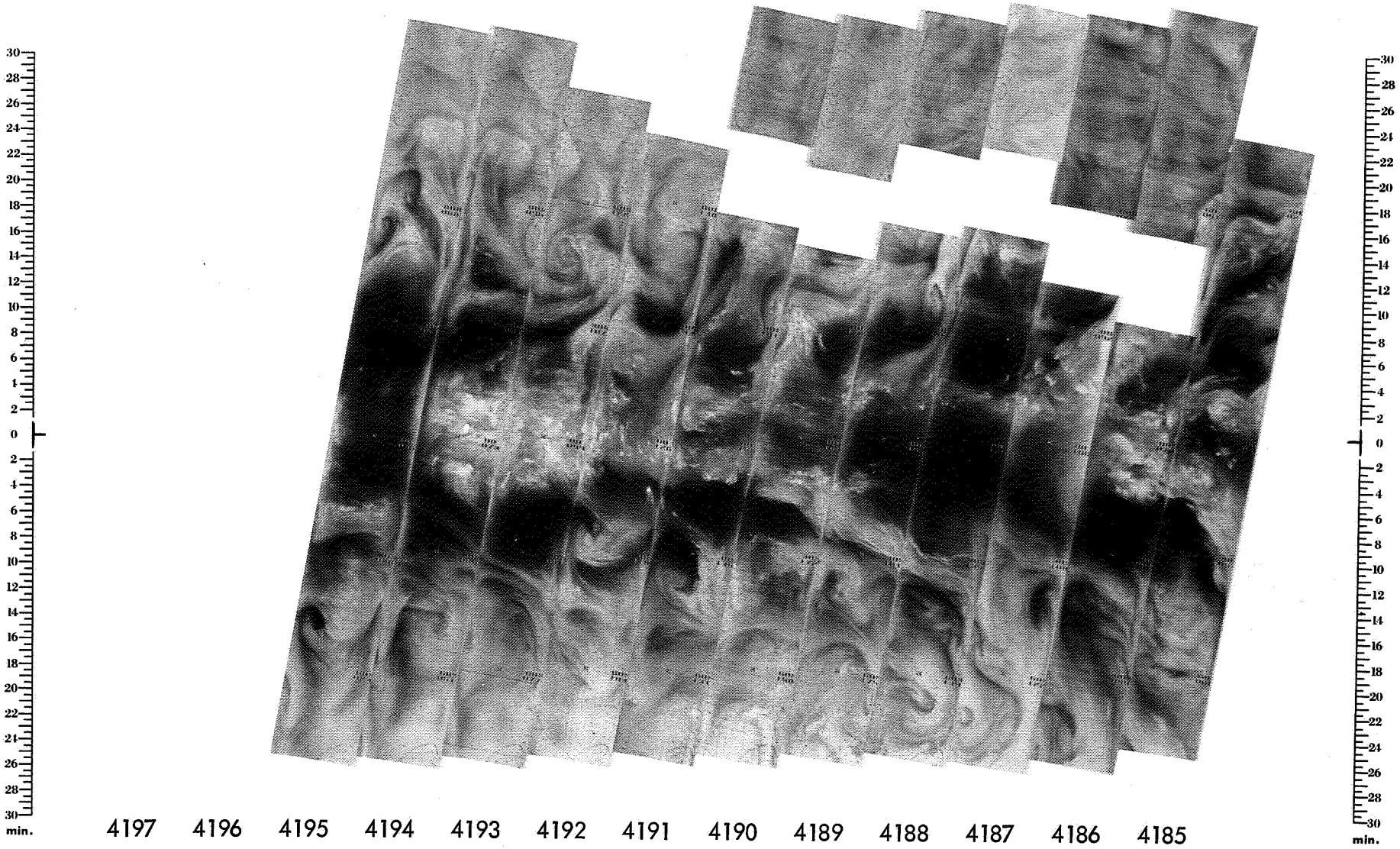
6.7 μm

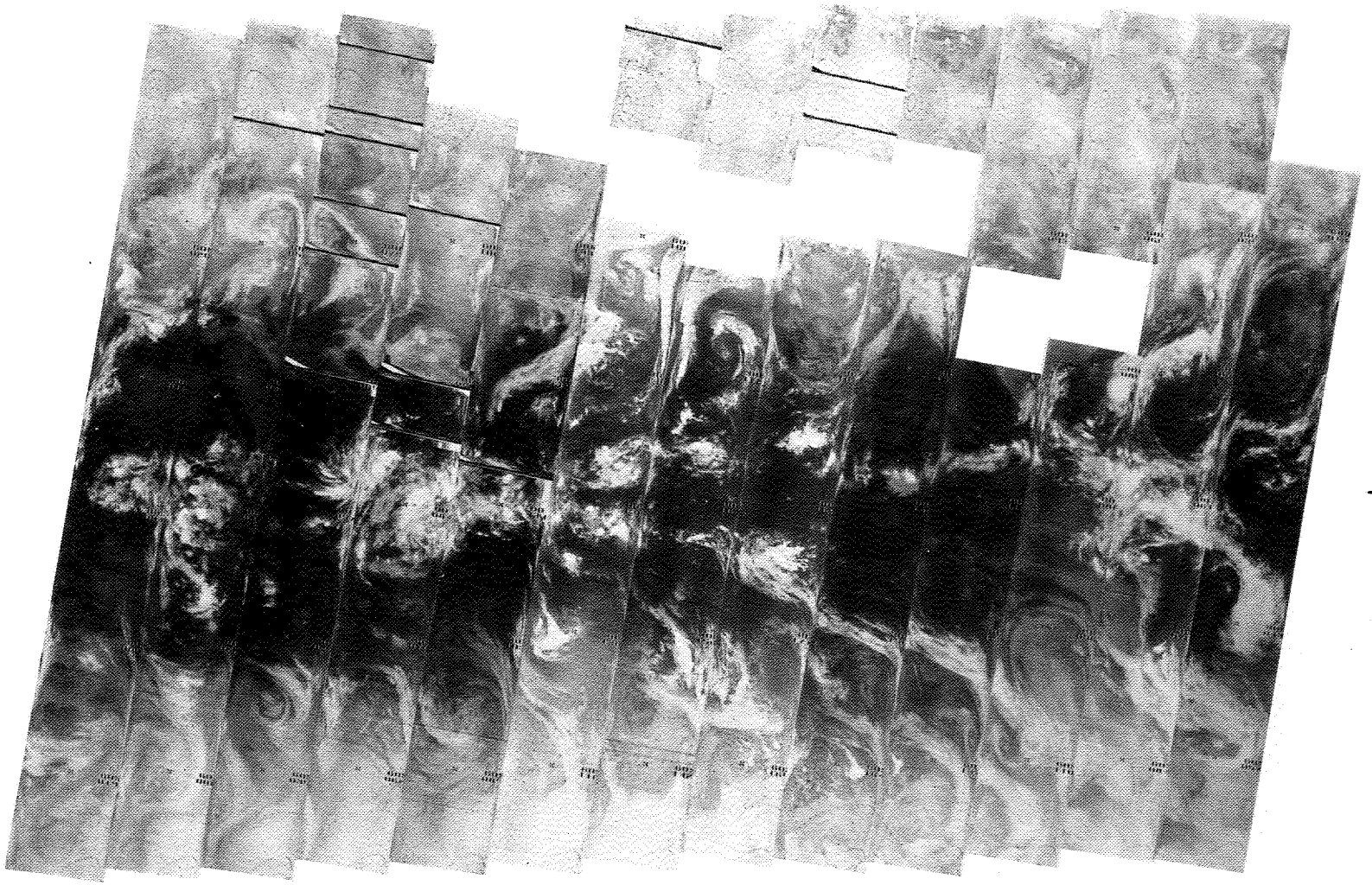


4197 4196 4195 4194 4193 4192 4191 4190 4189 4188 4187 4186 4185

19 OCTOBER 1973

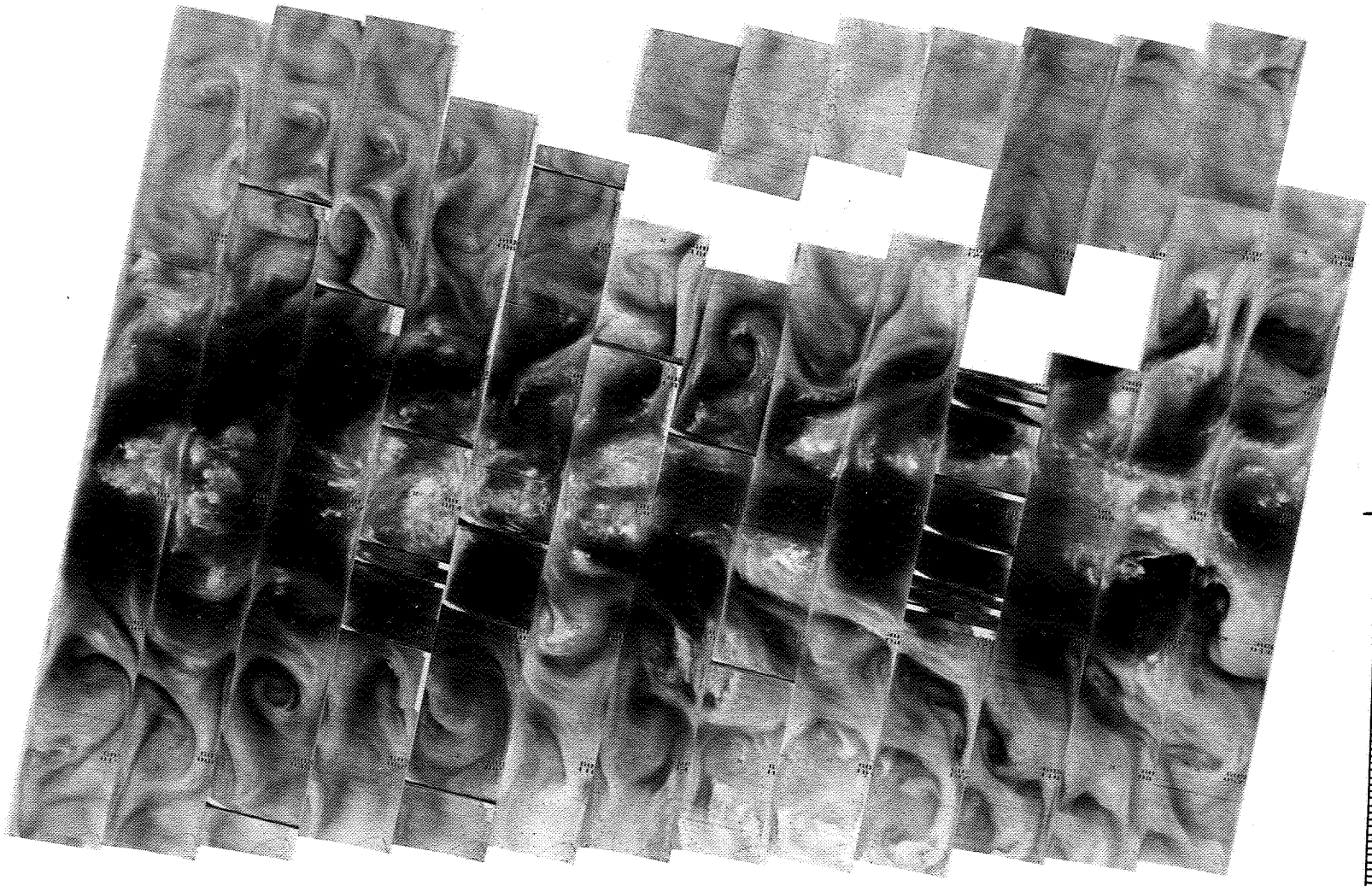
11.5 μm

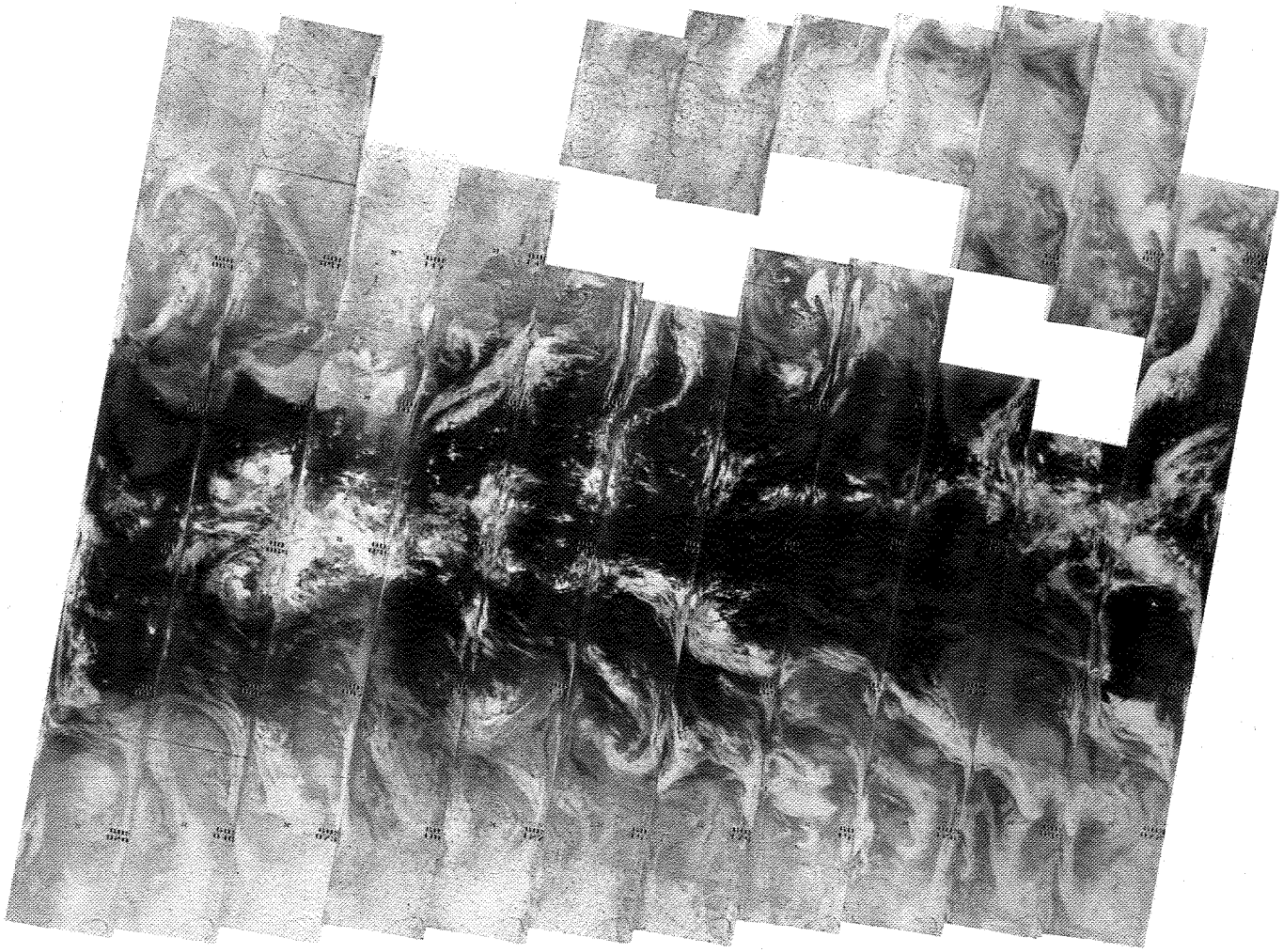

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4197 4196 4195 4194 4193 4192 4191 4190 4189 4188 4187 4186 4185
19 OCTOBER 1973
6.7 μm



20 OCTOBER 1973

11.5 μm

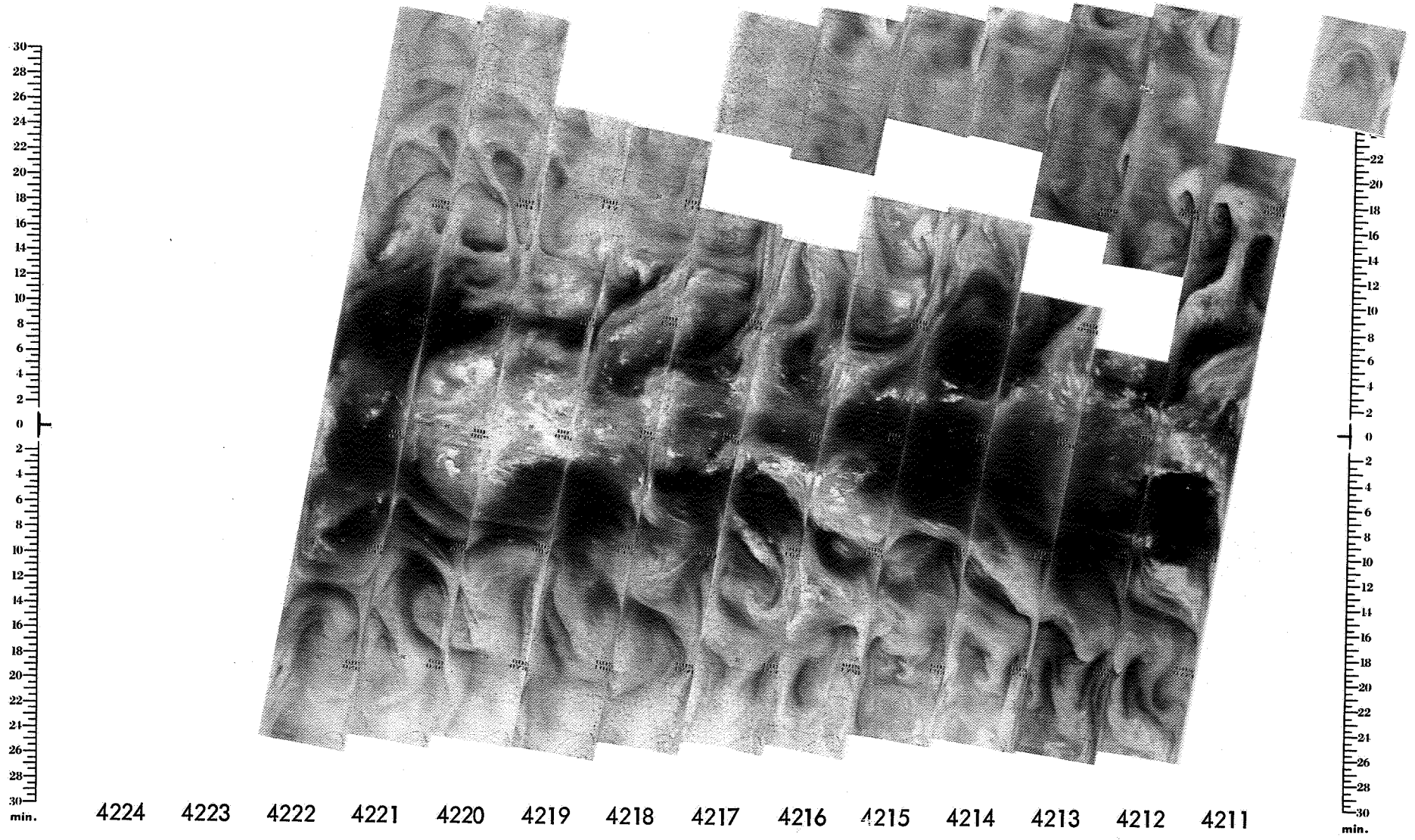

4210 4209 4208 4207 4206 4205 4204 4203 4202 4201 4200 4199 4198
20 OCTOBER 1973
6.7 μm
min.
min.

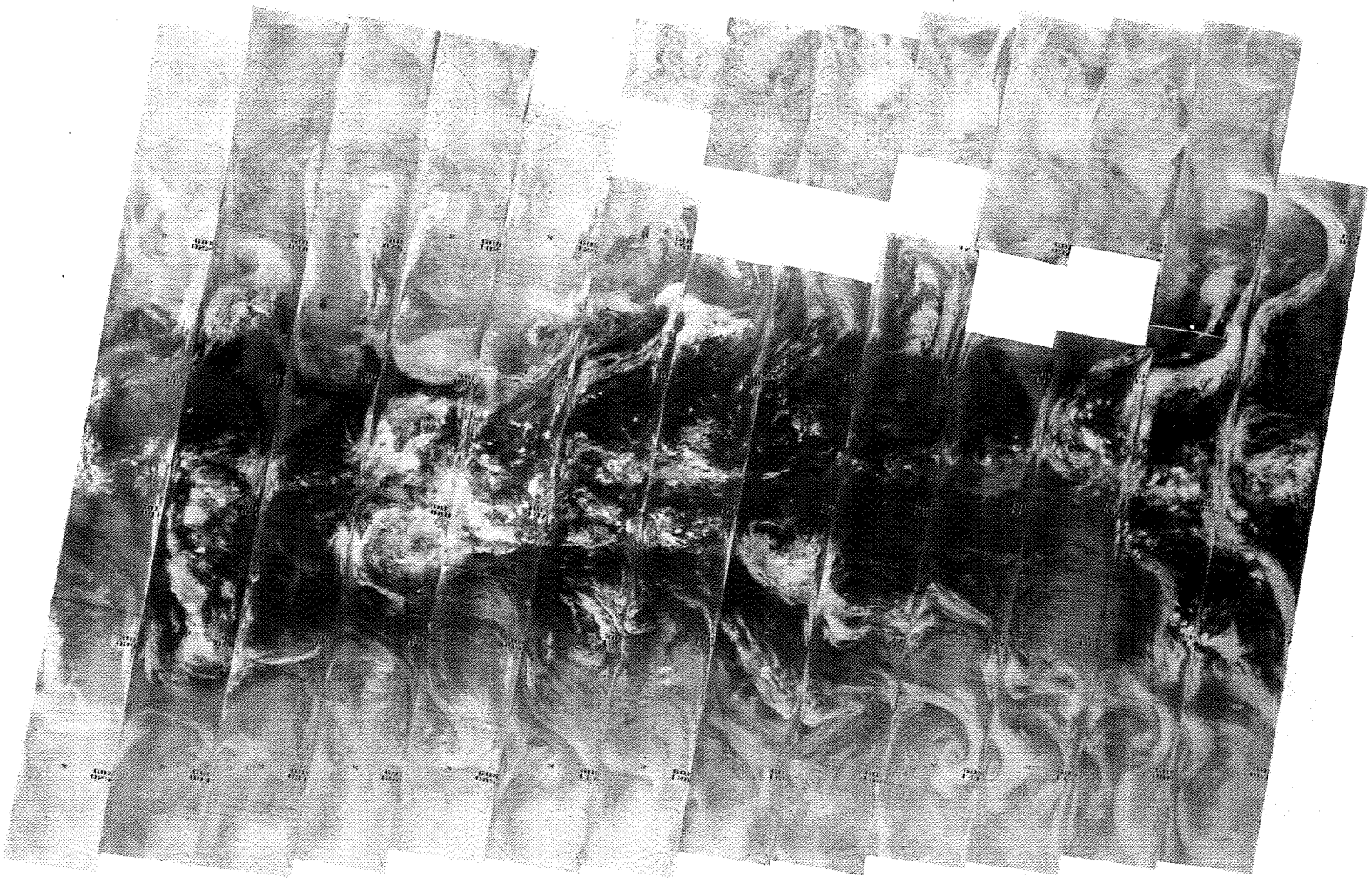


4224 4223 4222 4221 4220 4219 4218 4217 4216 4215 4214 4213 4212 4211

21 OCTOBER 1973

11.5 μm

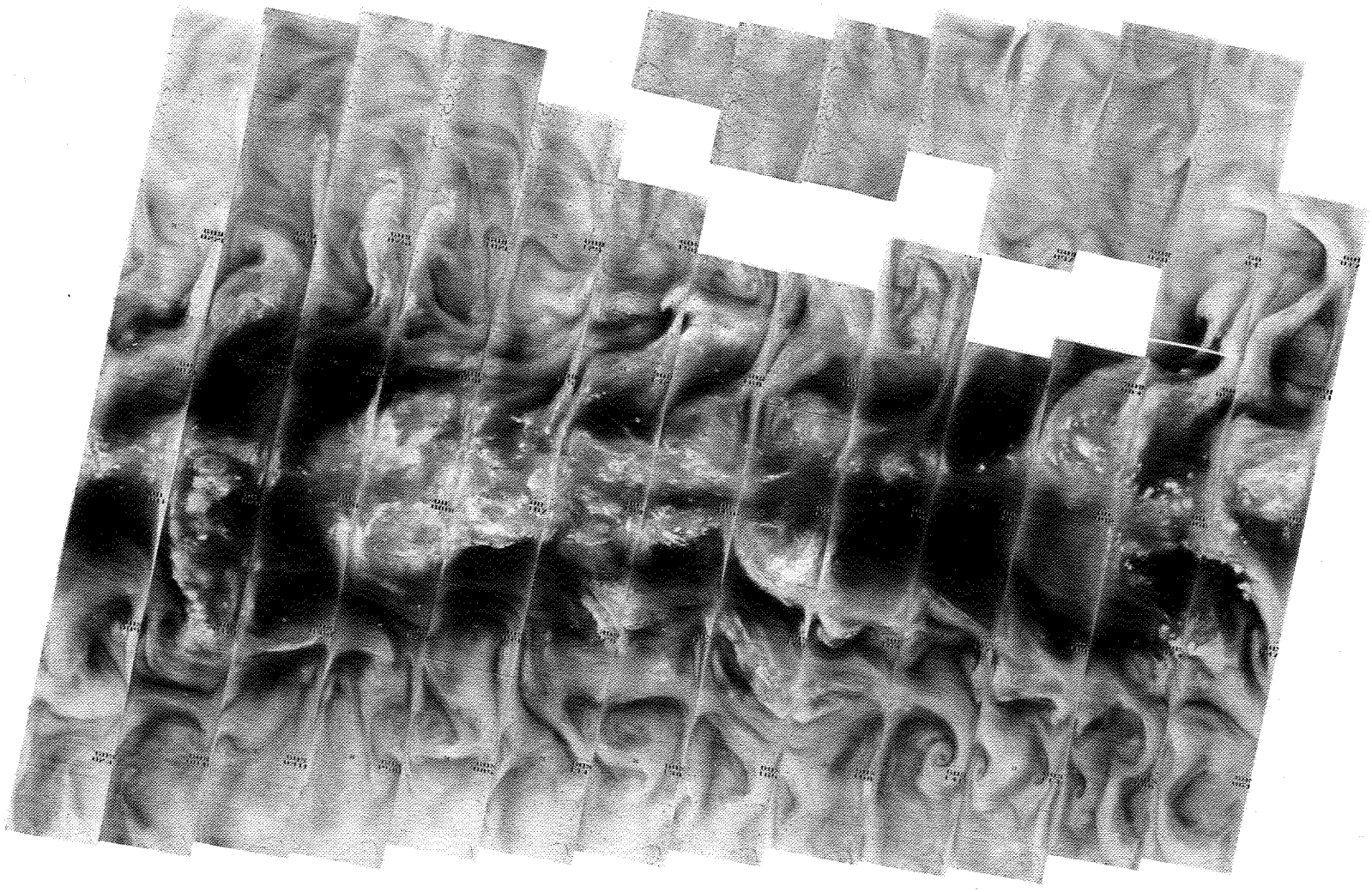

4224
4223
4222
4221
4220
4219
4218
4217
4216
4215
4214
4213
4212
4211
min.
21 OCTOBER 1973
6.7 μm

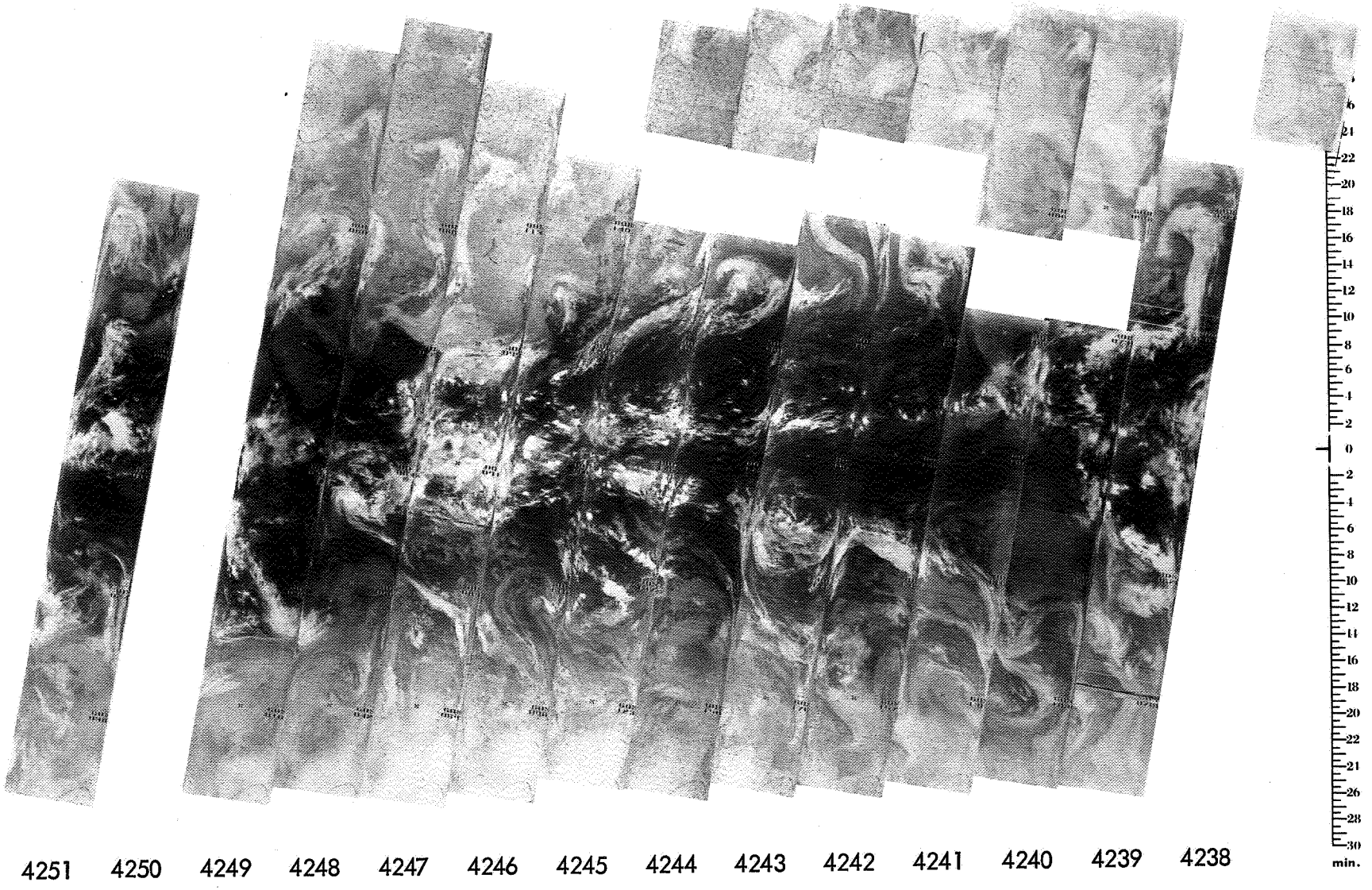


4237 4236 4235 4234 4233 4232 4231 4230 4229 4228 4227 4226 4225

22 OCTOBER 1973

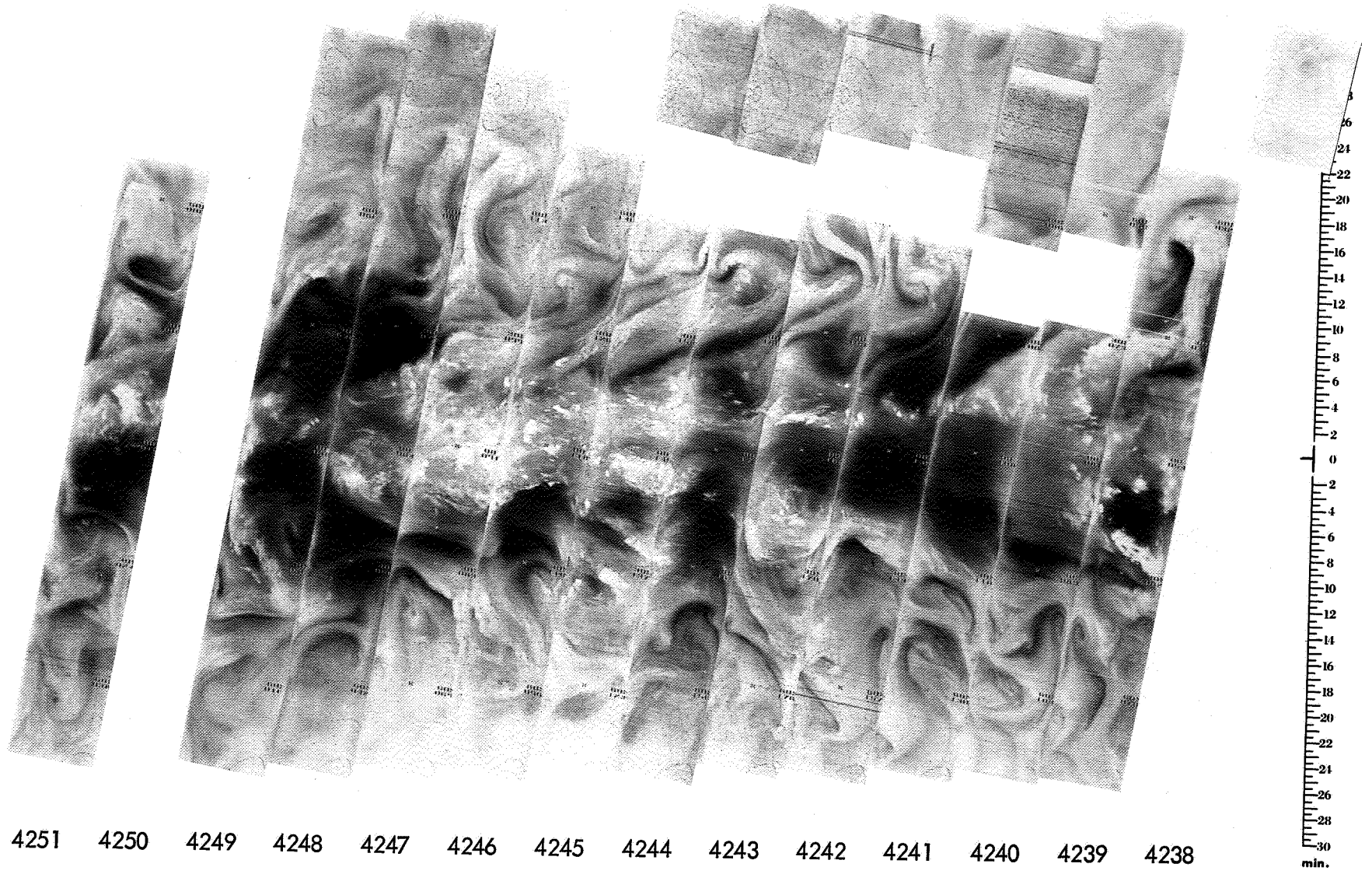
11.5 μm


4237
4236
4235
4234
4233
4232
4231
4230
4229
4228
4227
4226
4225
22 OCTOBER 1973
6.7 μm
min.
min.



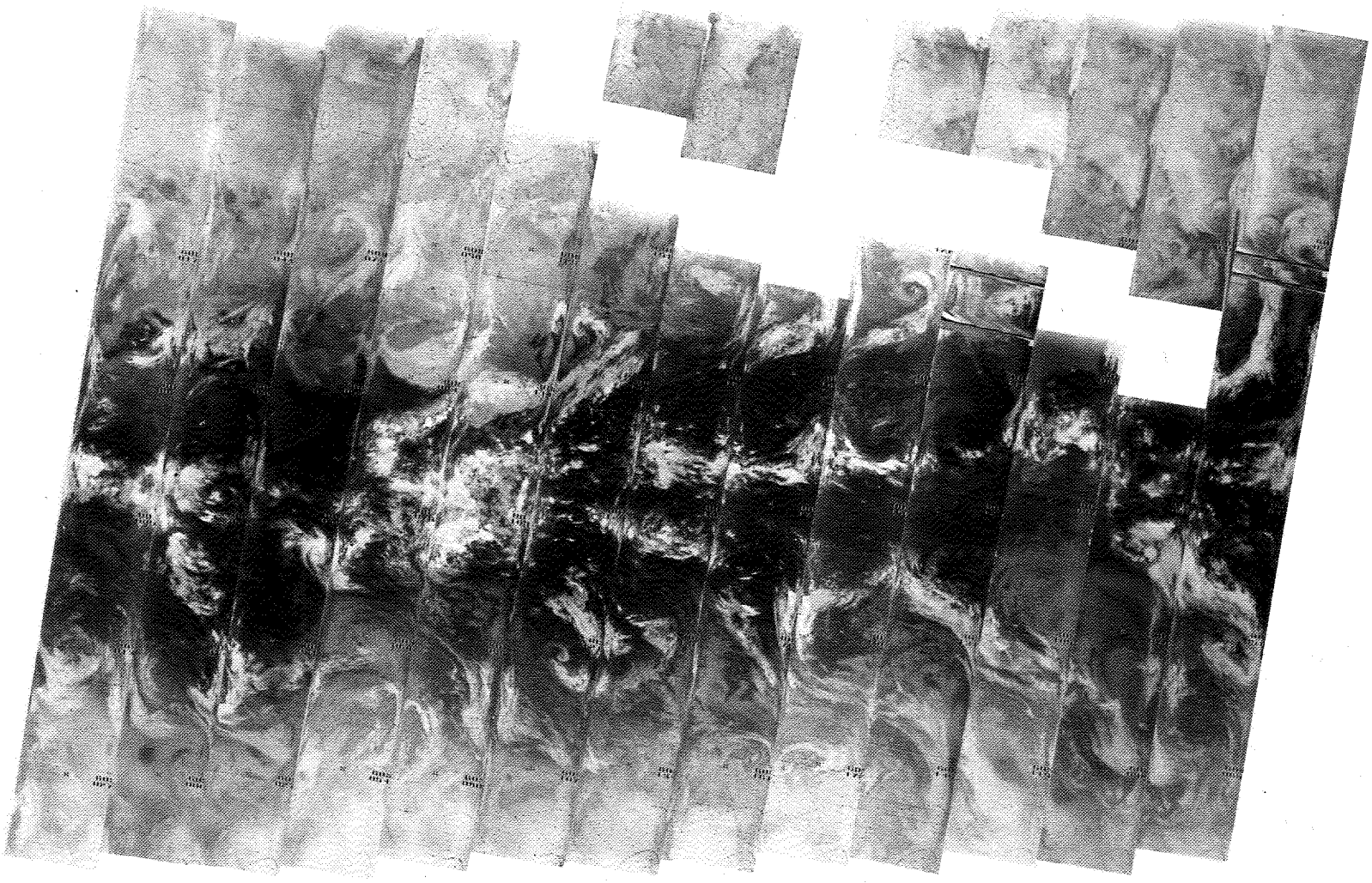
23 OCTOBER 1973

11.5 μm



23 OCTOBER 1973

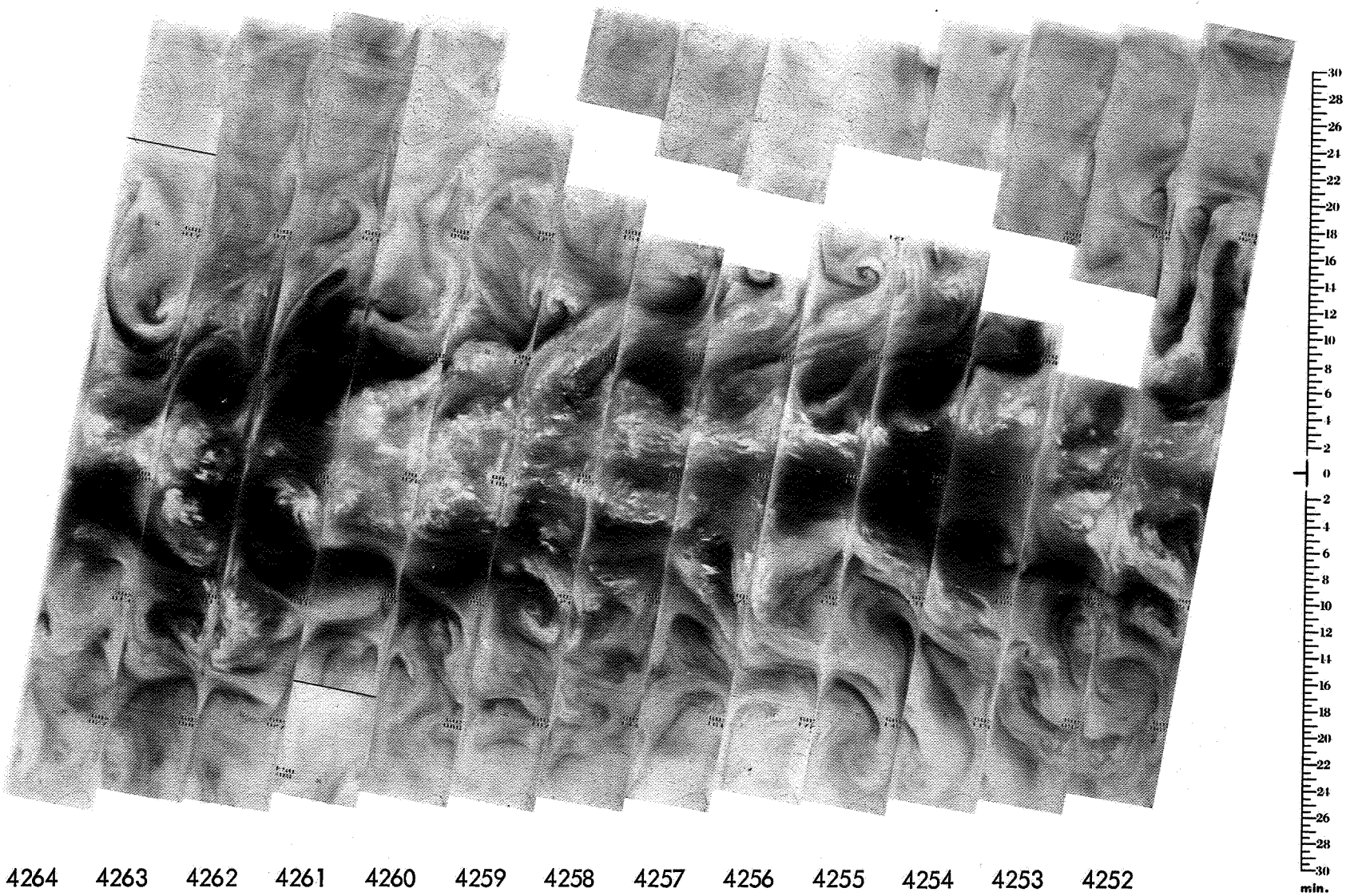
6.7 μm



4264 4263 4262 4261 4260 4259 4258 4257 4256 4255 4254 4253 4252

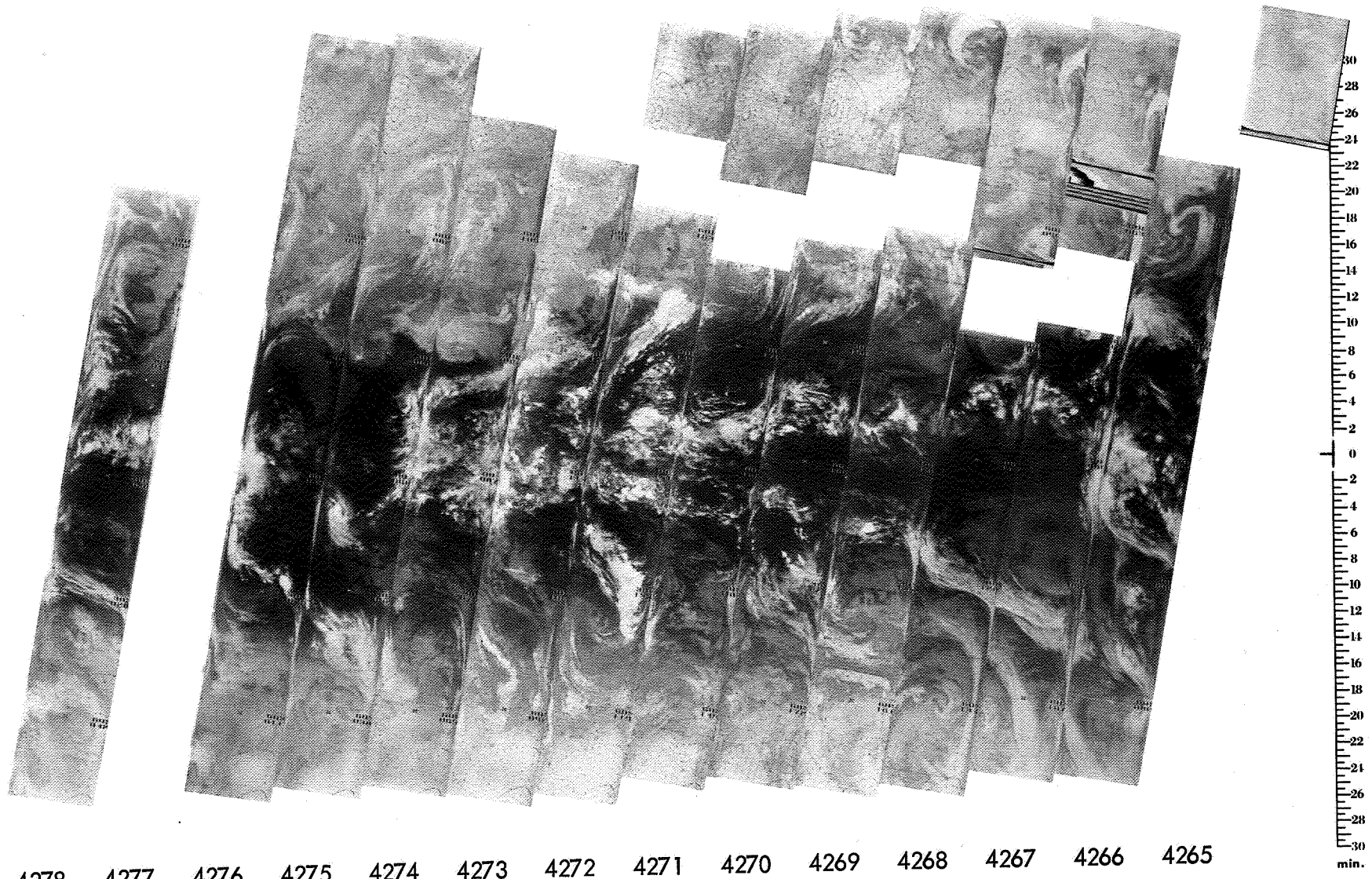
24 OCTOBER 1973

11.5 μm



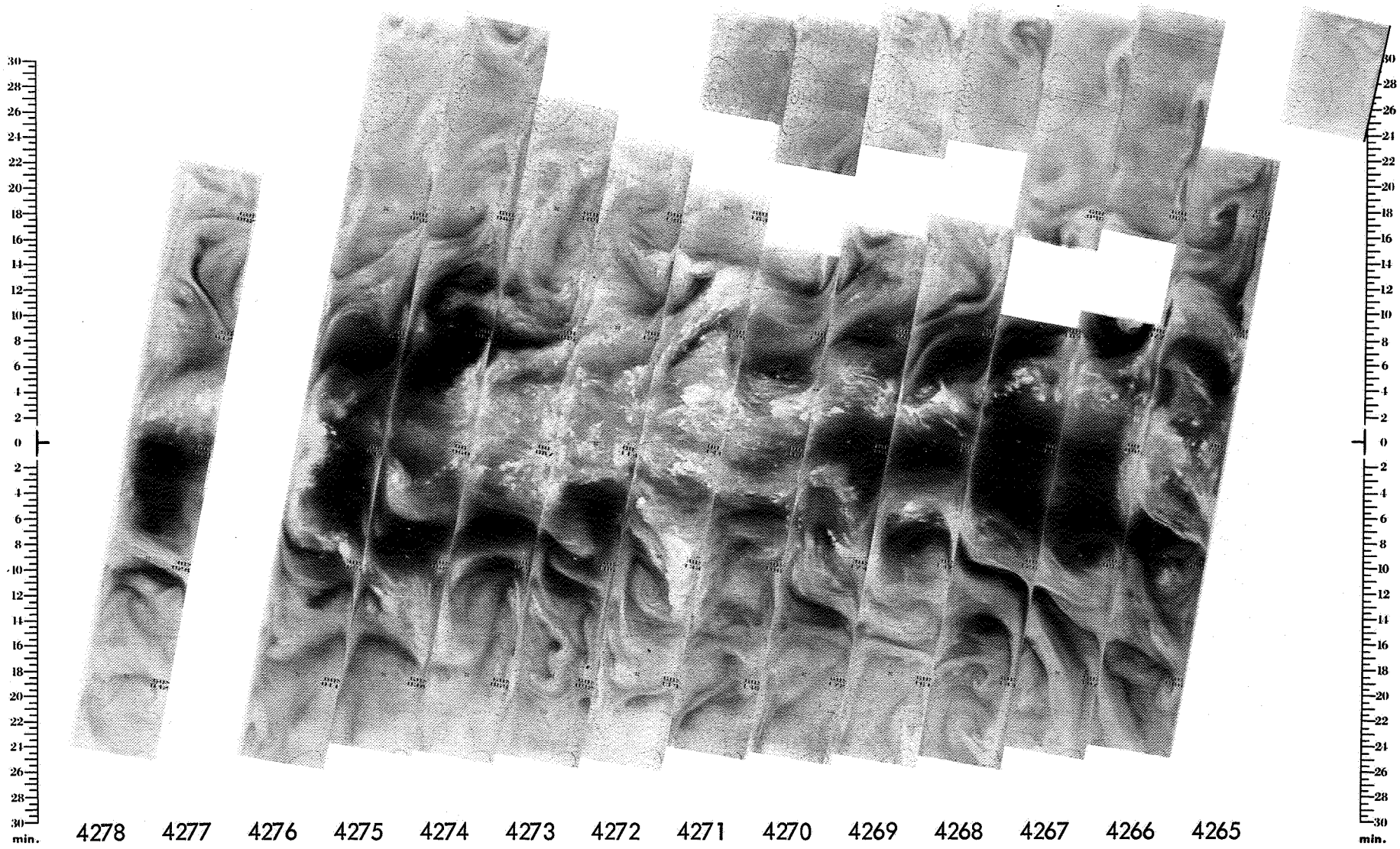
24 OCTOBER 1973

6.7 μm



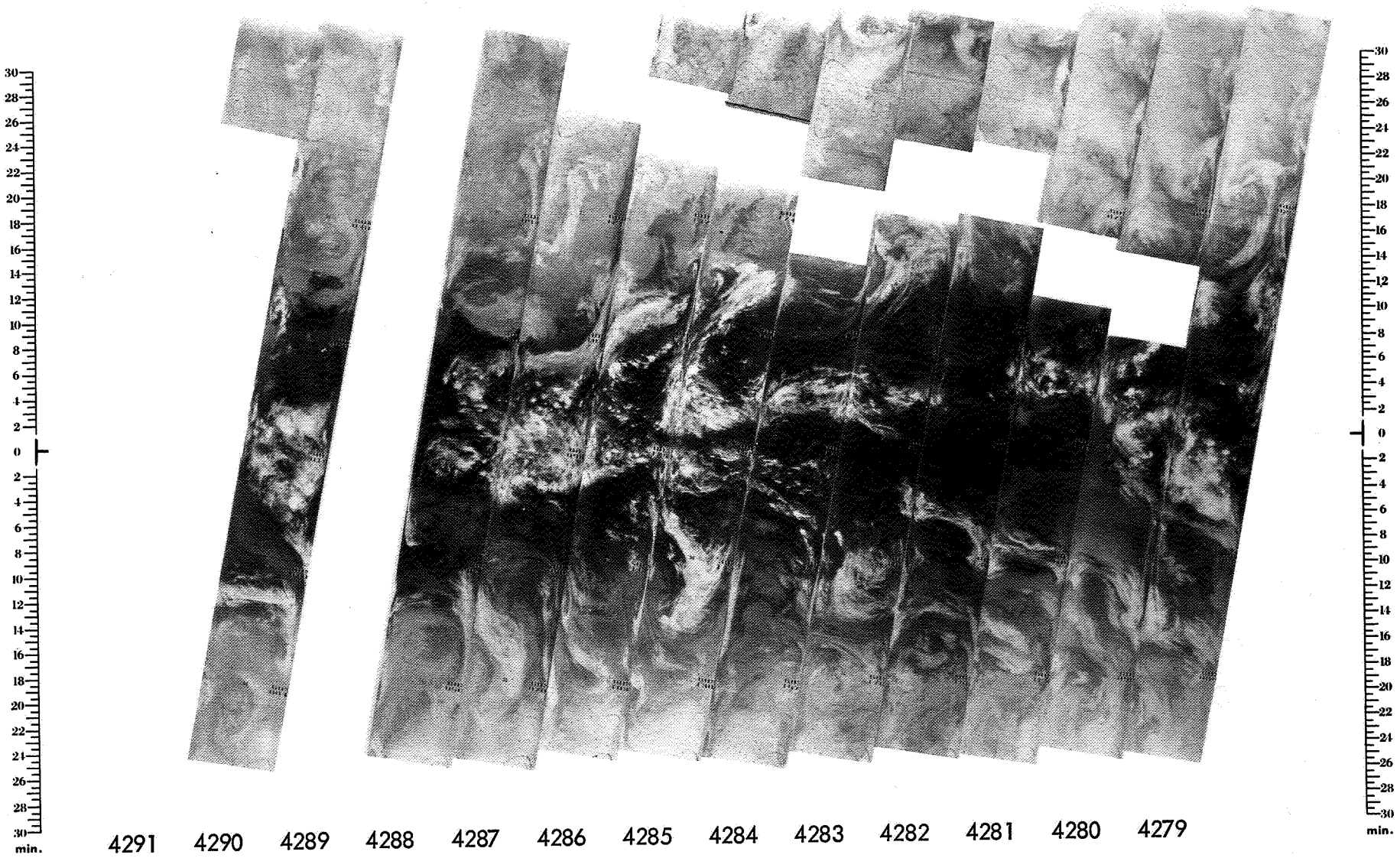
25 OCTOBER 1973

11.5 μm



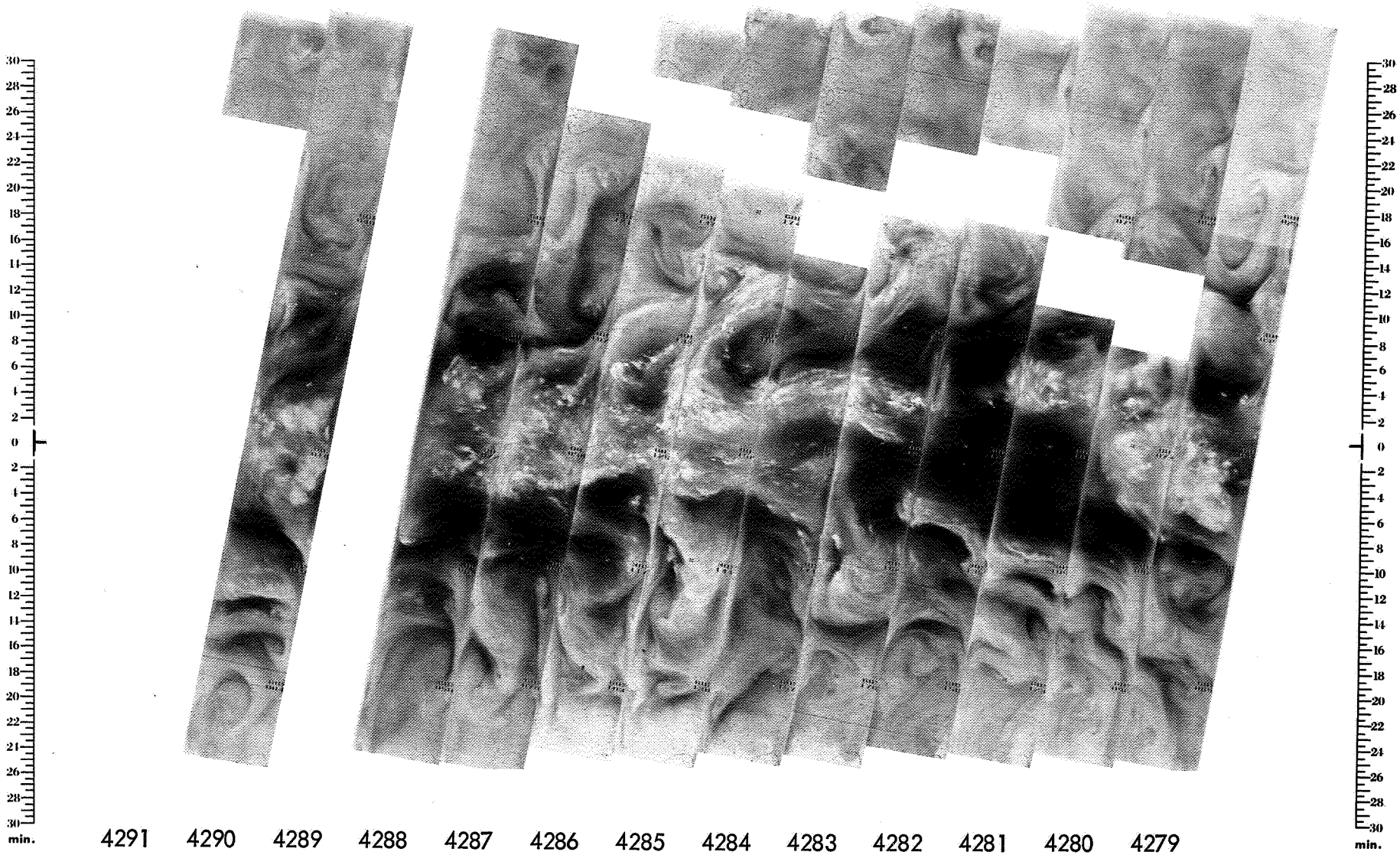
25 OCTOBER 1973

6.7 μm



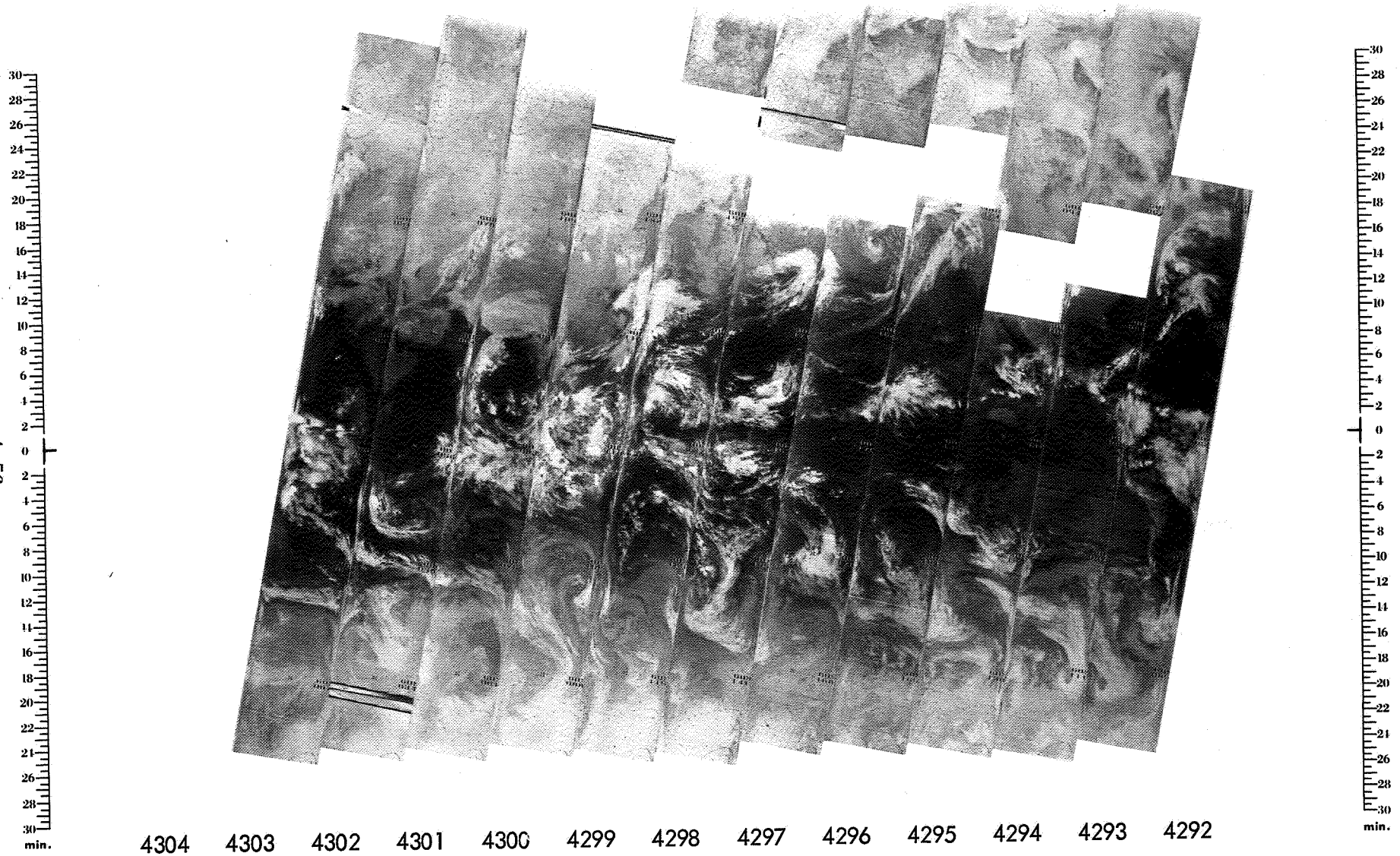
26 OCTOBER 1973

11.5 μm



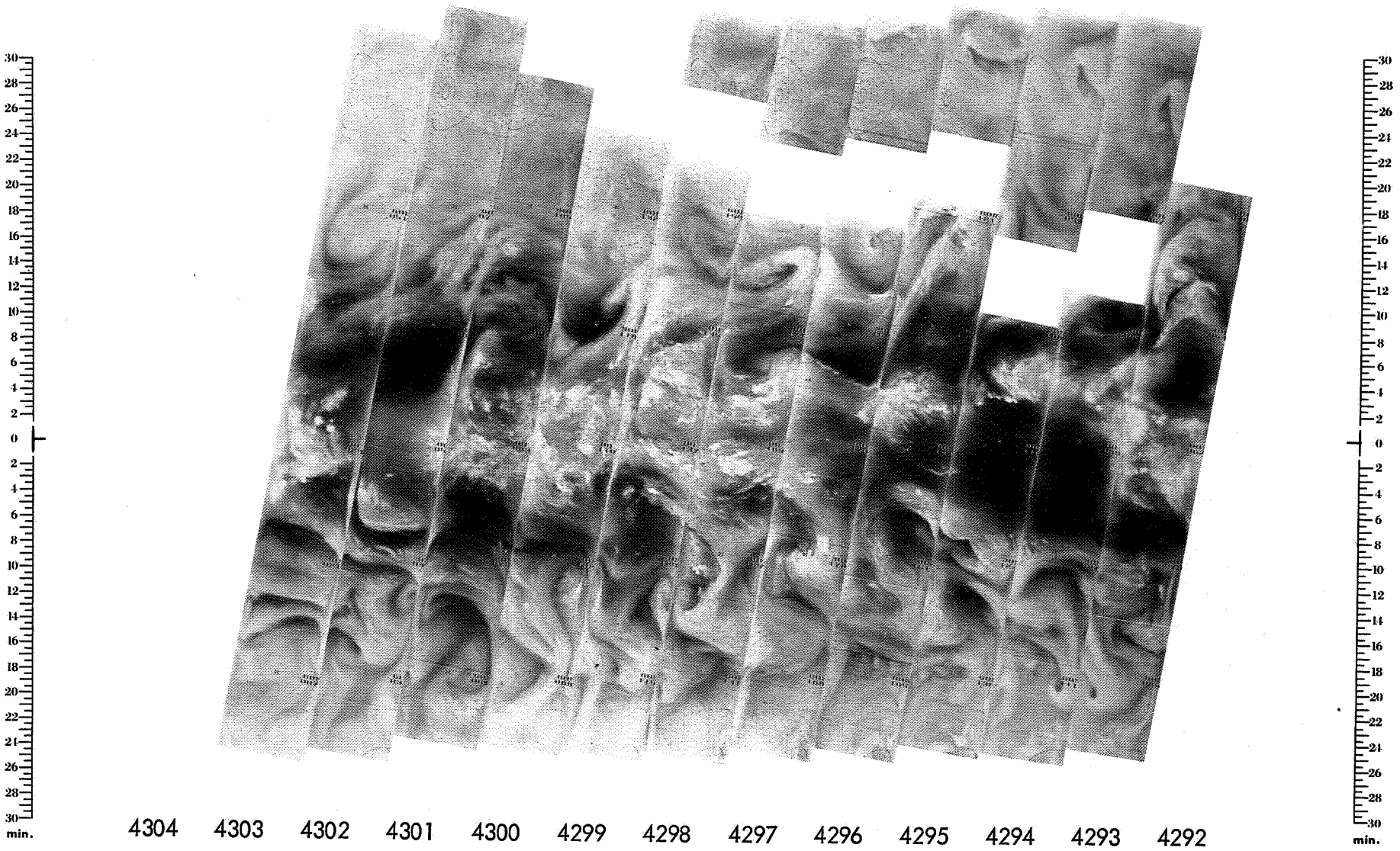
26 OCTOBER 1973

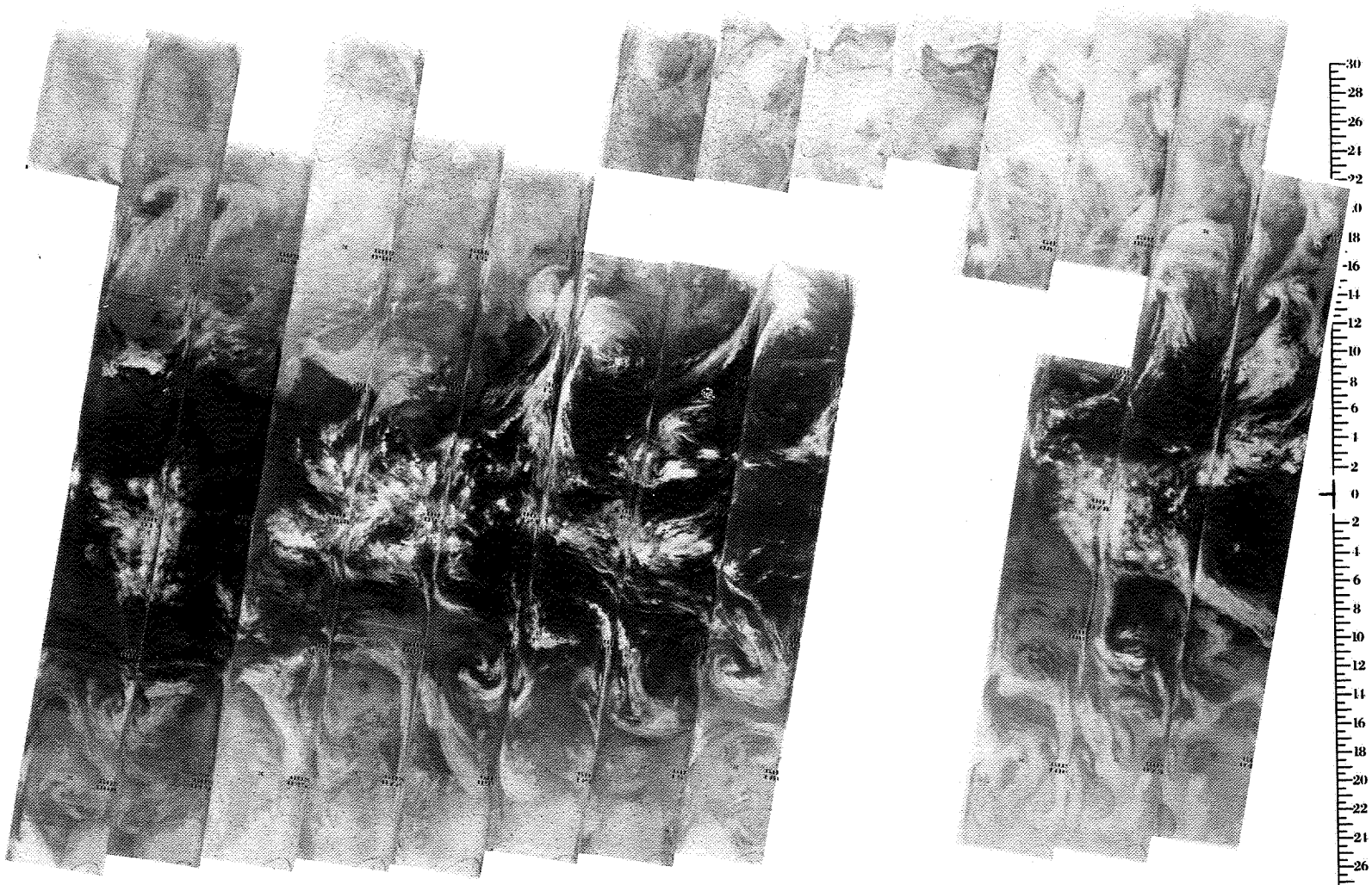
6.7 μm



27 OCTOBER 1973

11.5 μm

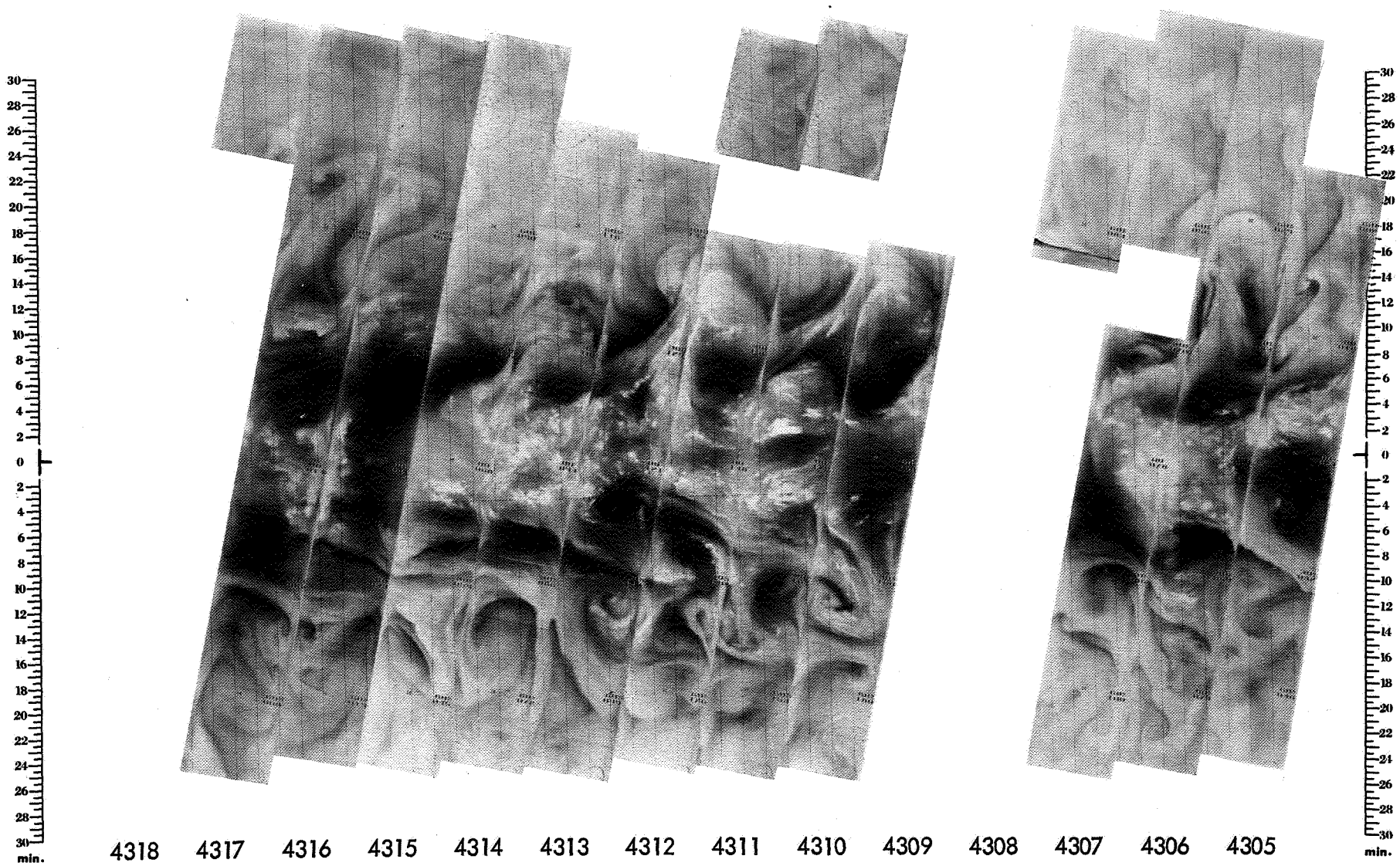

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4304 4303 4302 4301 4300 4299 4298 4297 4296 4295 4294 4293 4292
27 OCTOBER 1973
6.7 μm



4318 4317 4316 4315 4314 4313 4312 4311 4310 4309 4308 4307 4306 4305

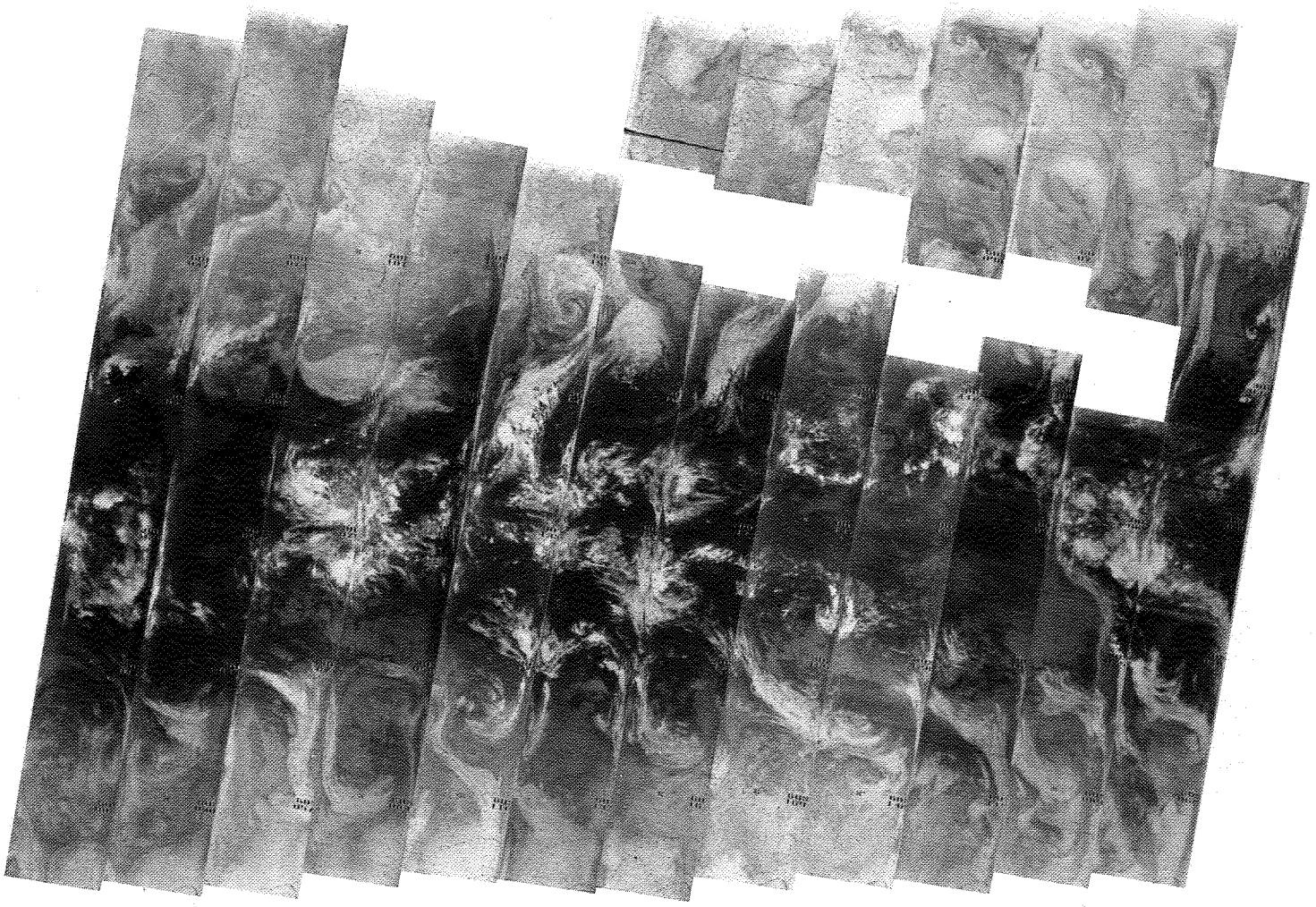
28 OCTOBER 1973

11.5 μm



28 OCTOBER 1973

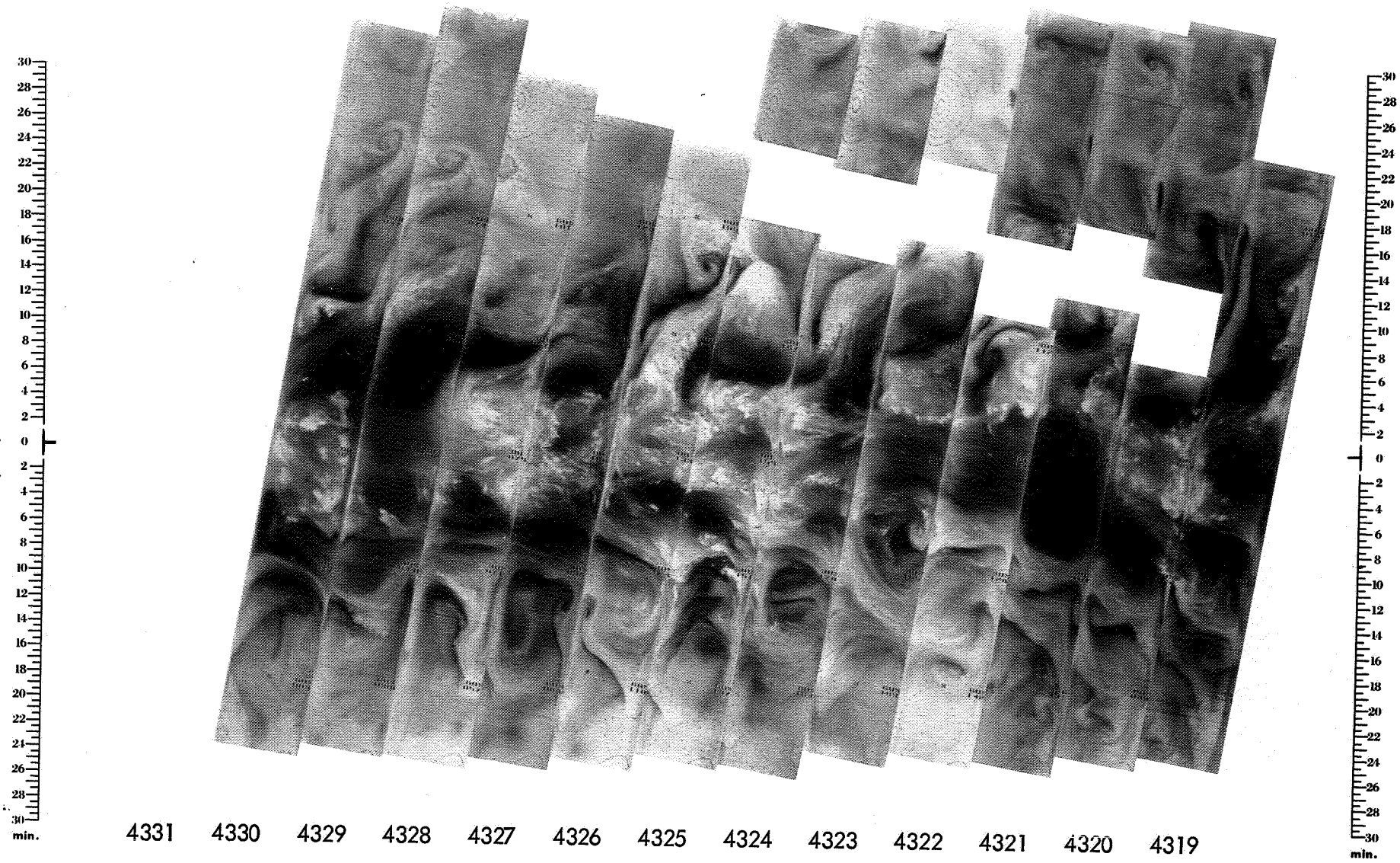
6.7 μm



4331 4330 4329 4328 4327 4326 4325 4324 4323 4322 4321 4320 4319

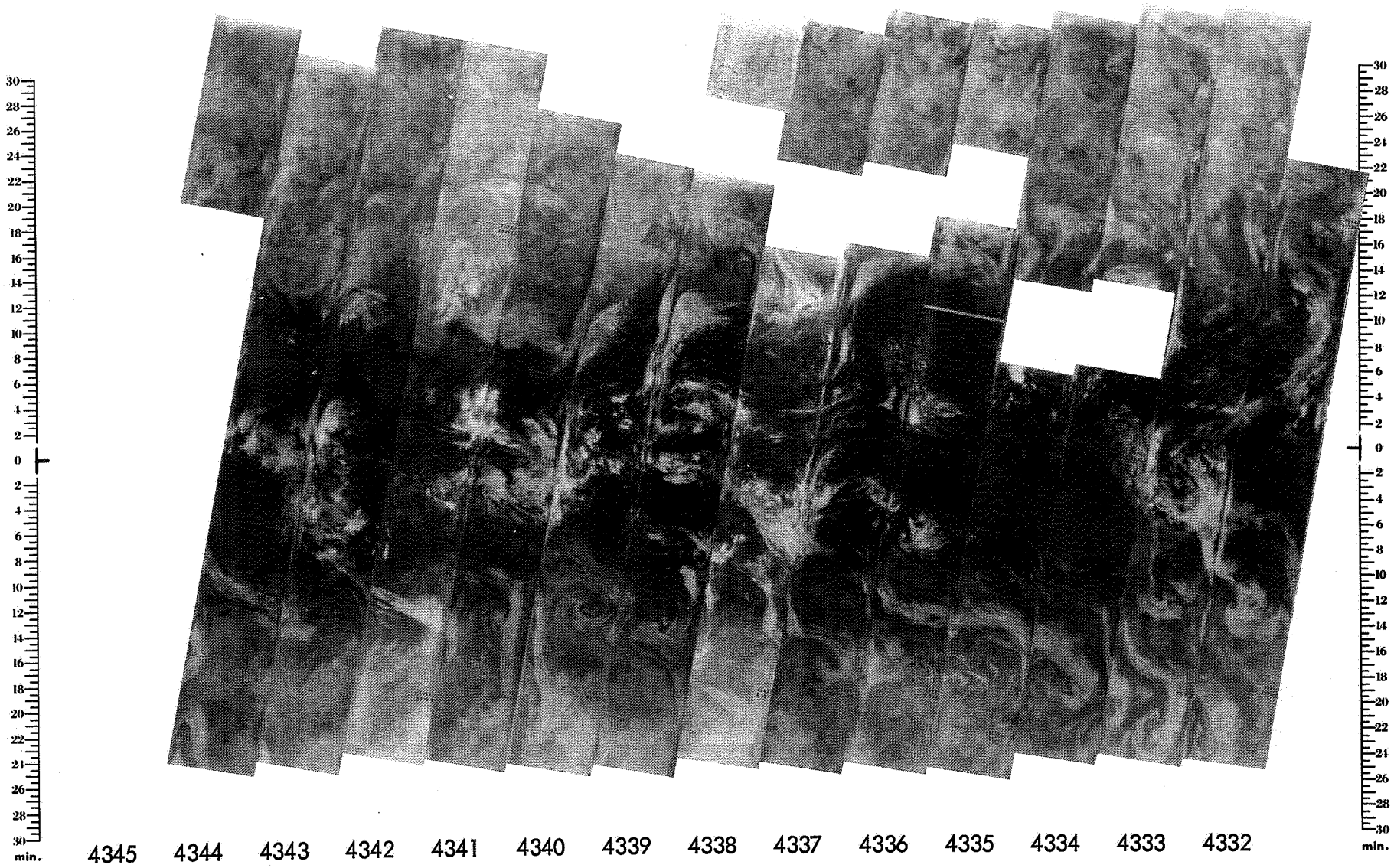
29 OCTOBER 1973

11.5 μm



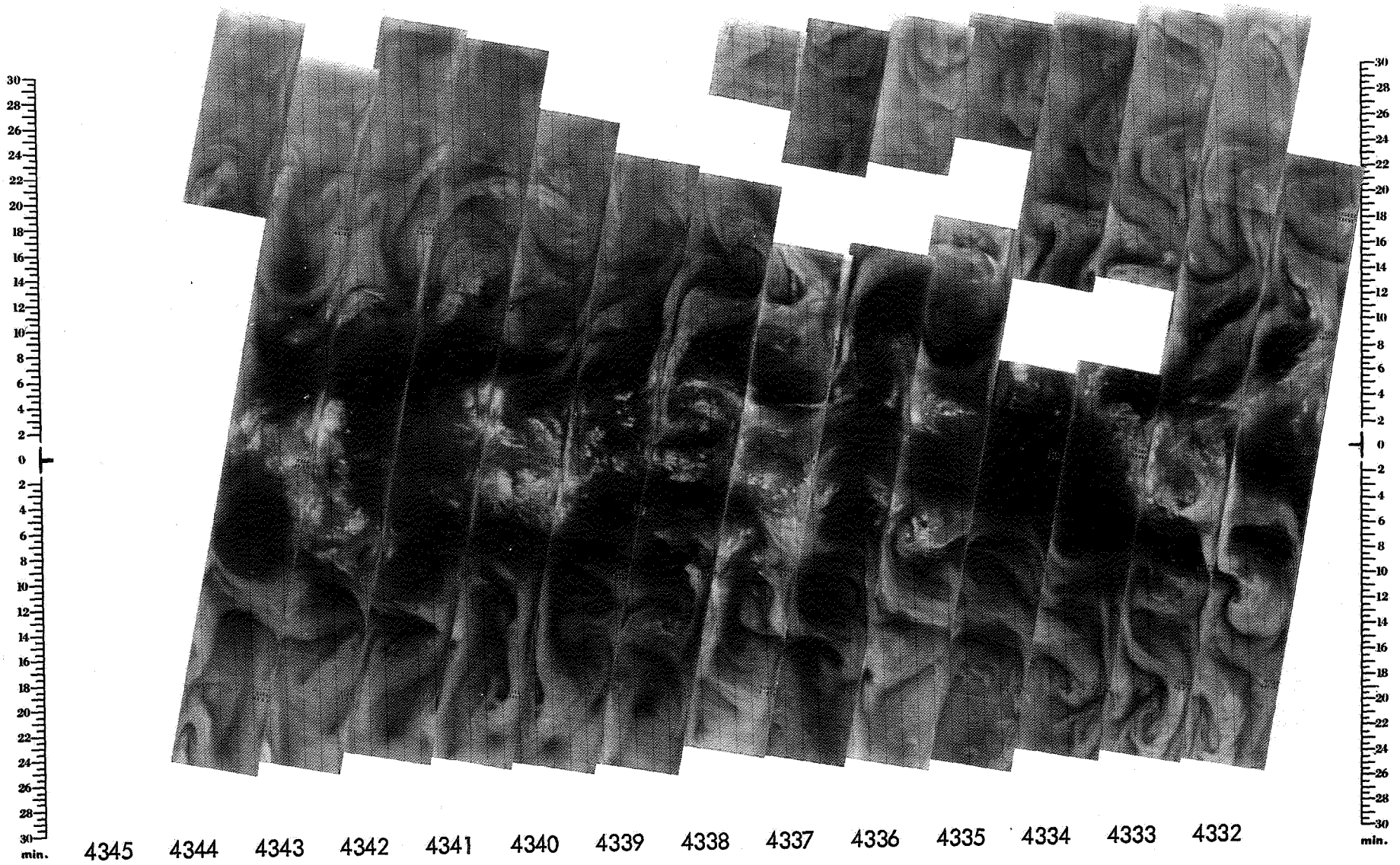
29 OCTOBER 1973

6.7 μm



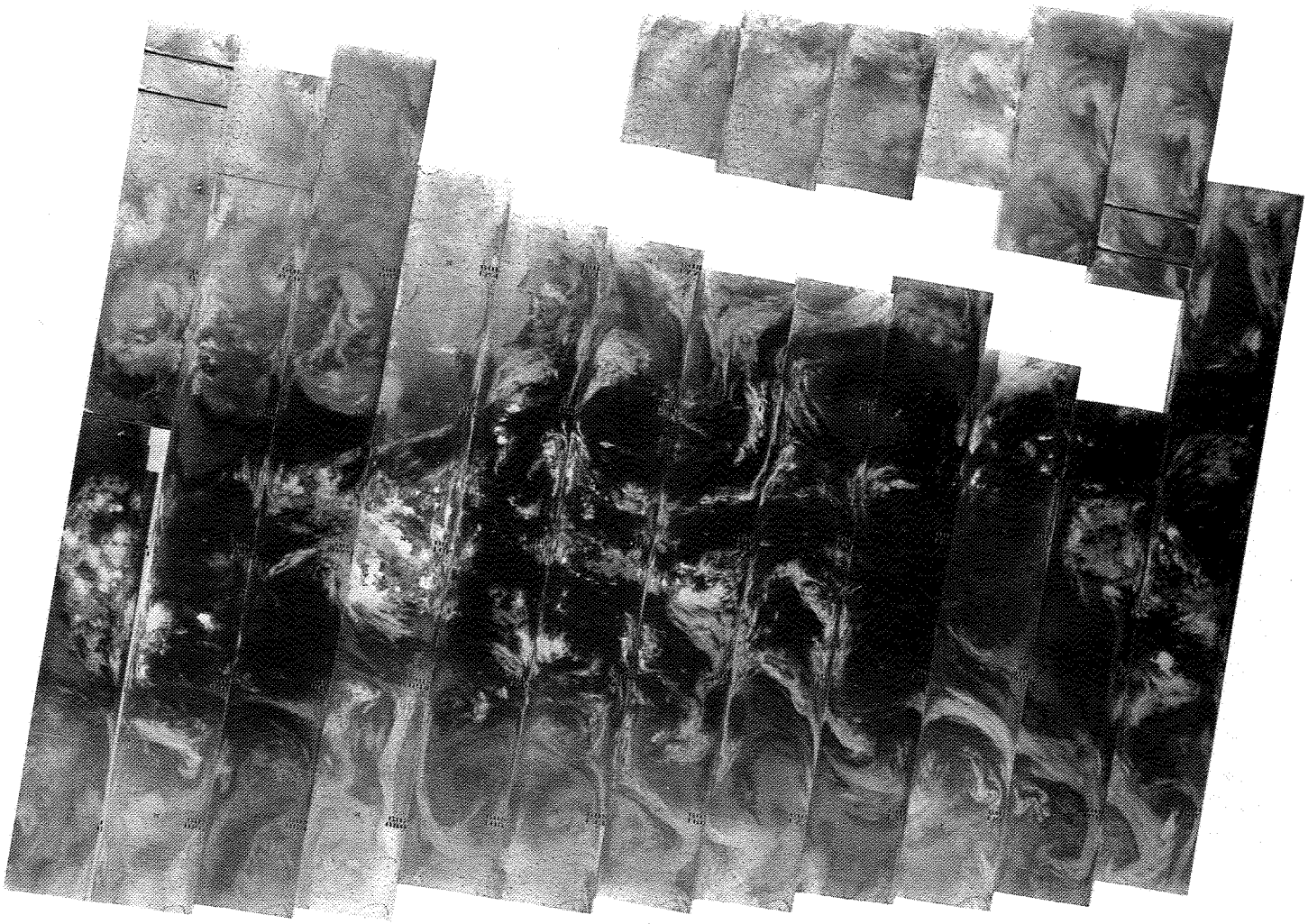
30 OCTOBER 1973

11.5 μm



30 OCTOBER 1973

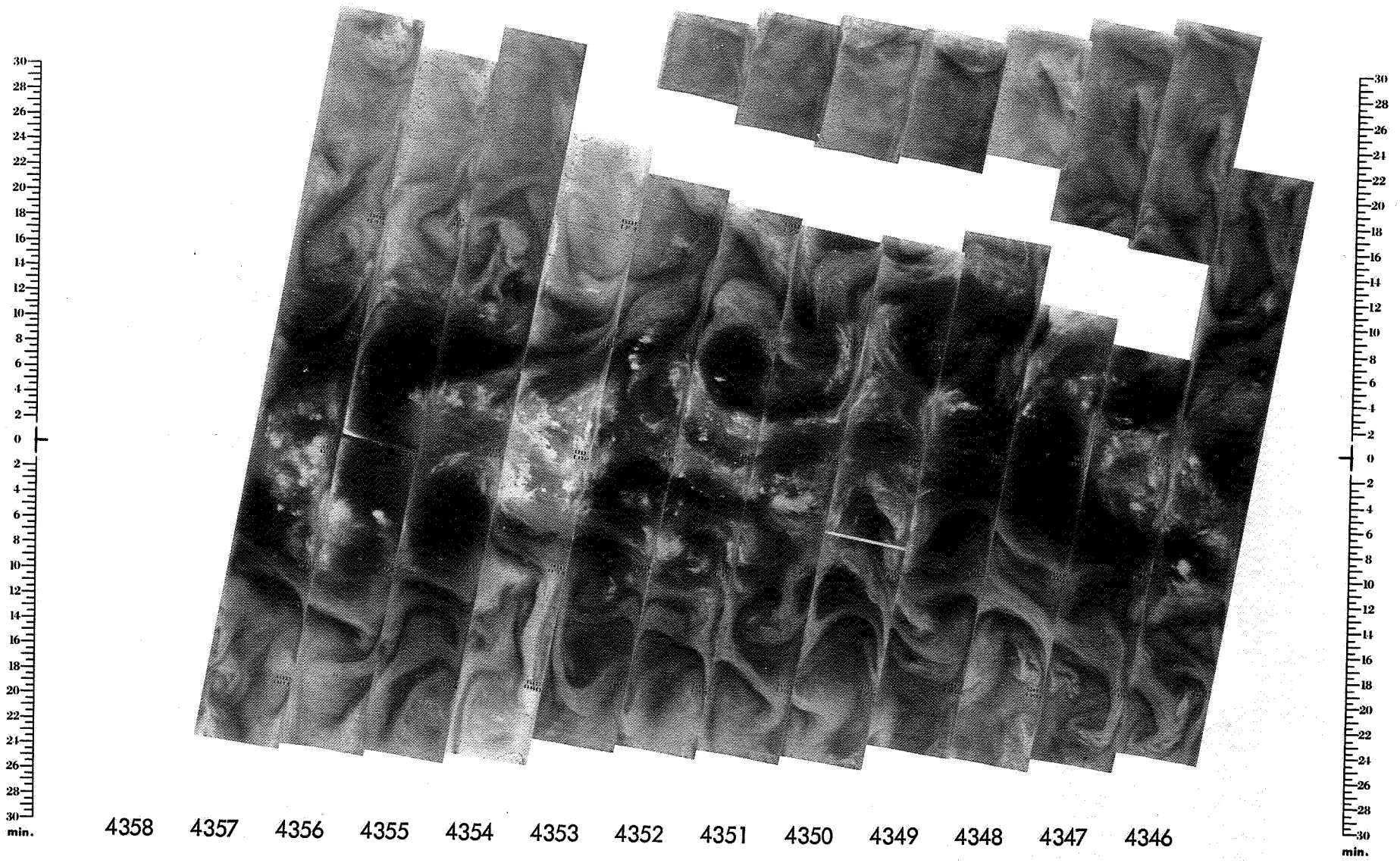
6.7 μm



4358 4357 4356 4355 4354 4353 4352 4351 4350 4349 4348 4347 4346

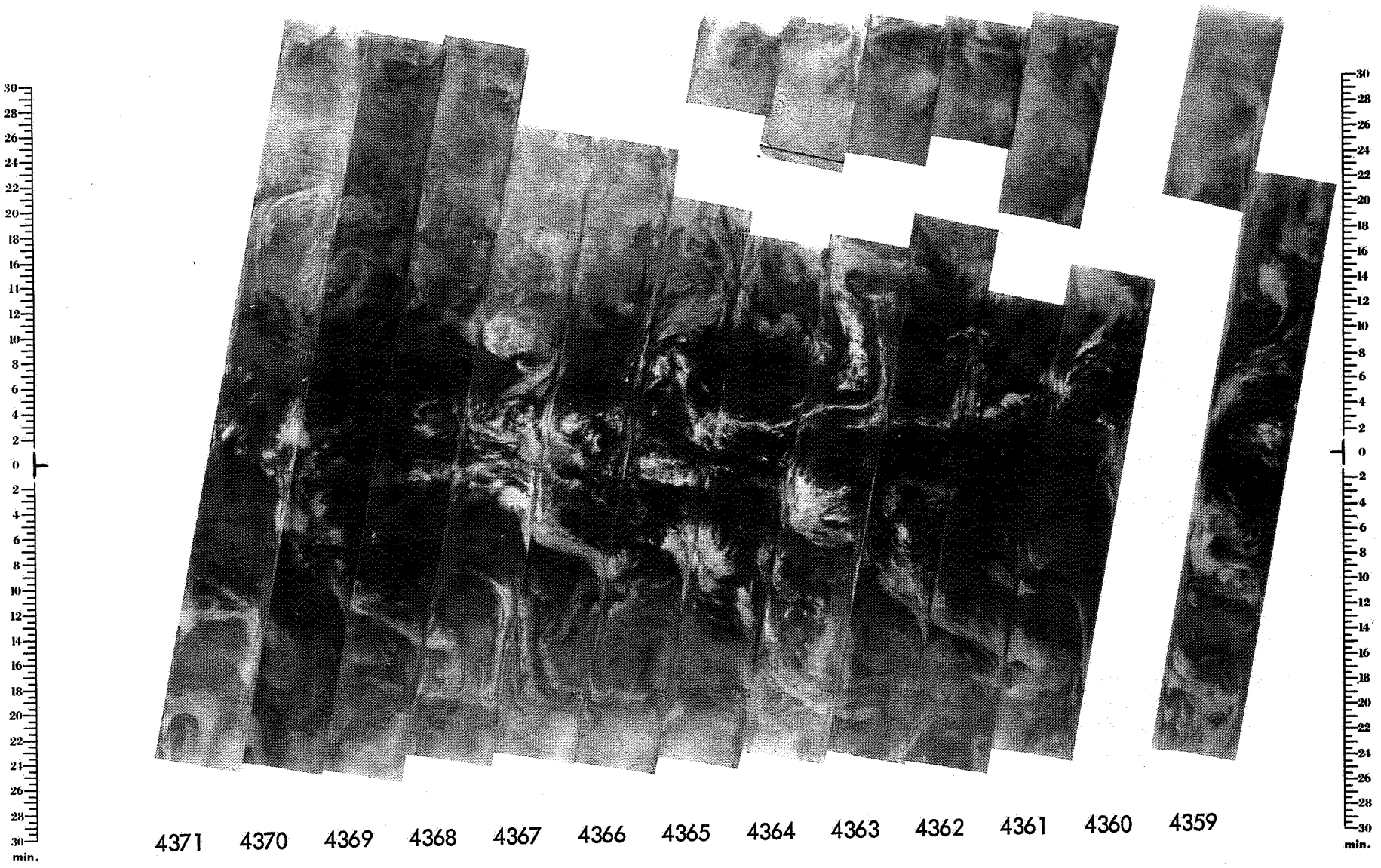
31 OCTOBER 1963

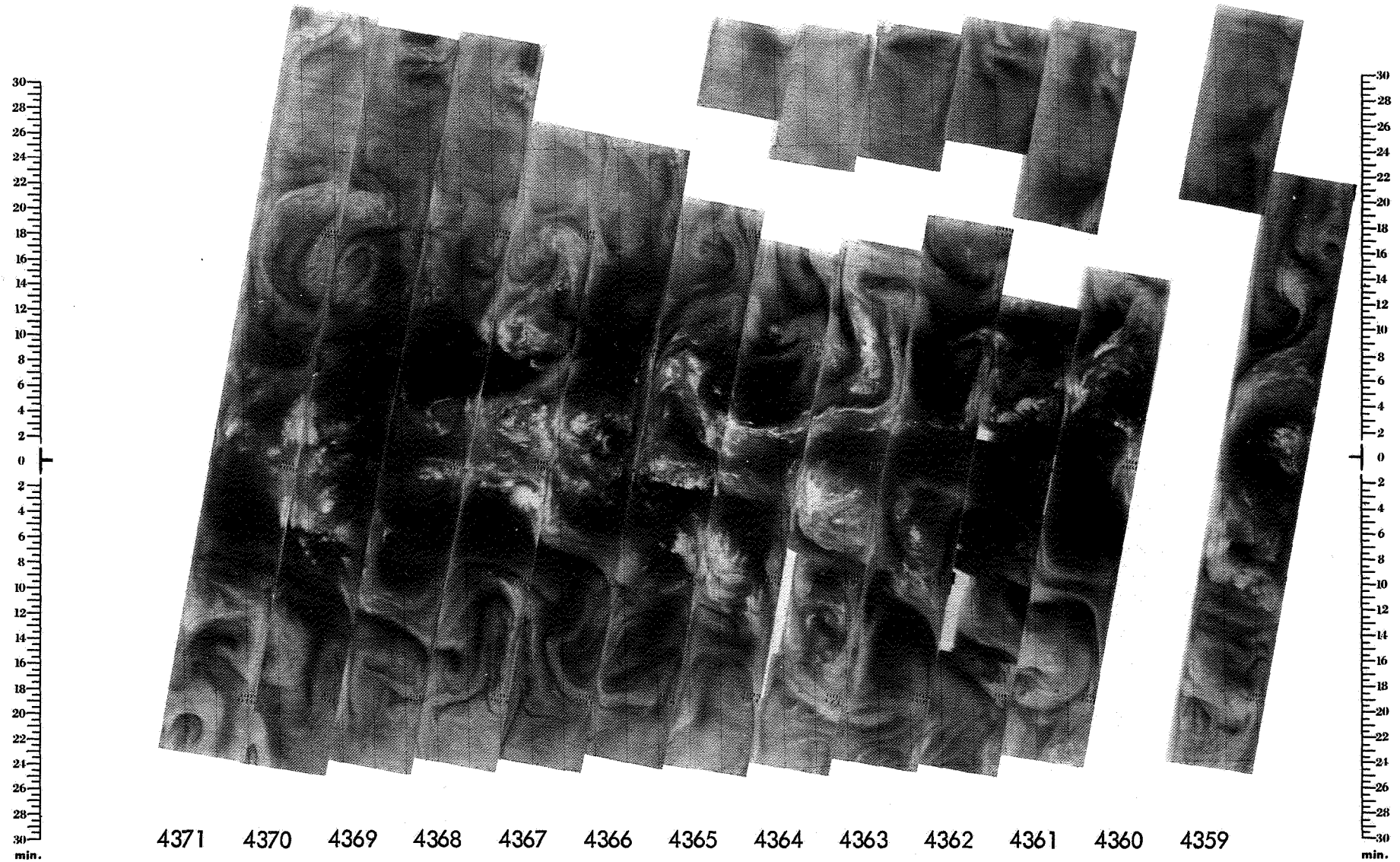
11.5 μm



31 OCTOBER 1973

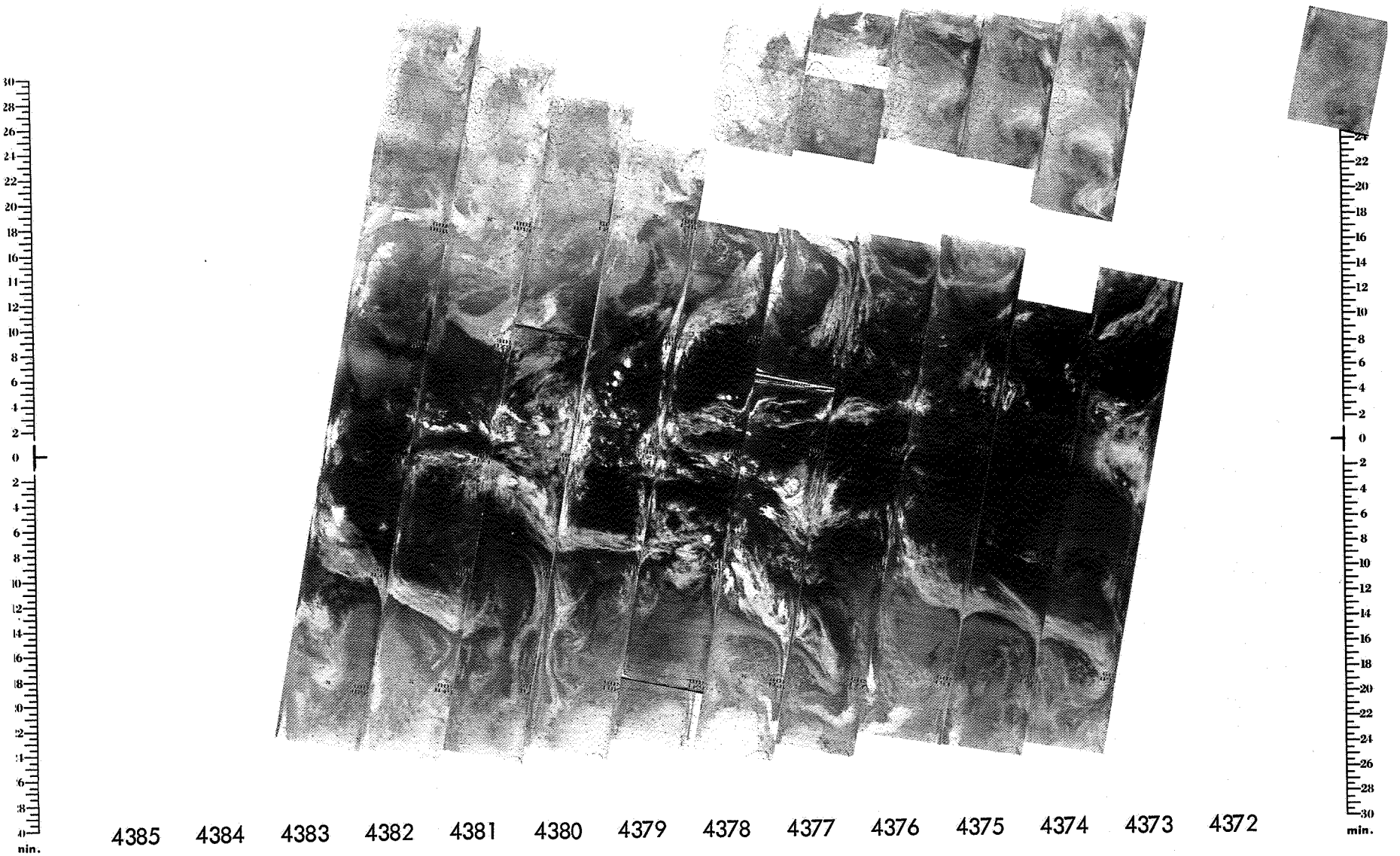
6.7 μm


4371 4370 4369 4368 4367 4366 4365 4364 4363 4362 4361 4360 4359
1 NOVEMBER 1973
11.5 μm
min.
min.



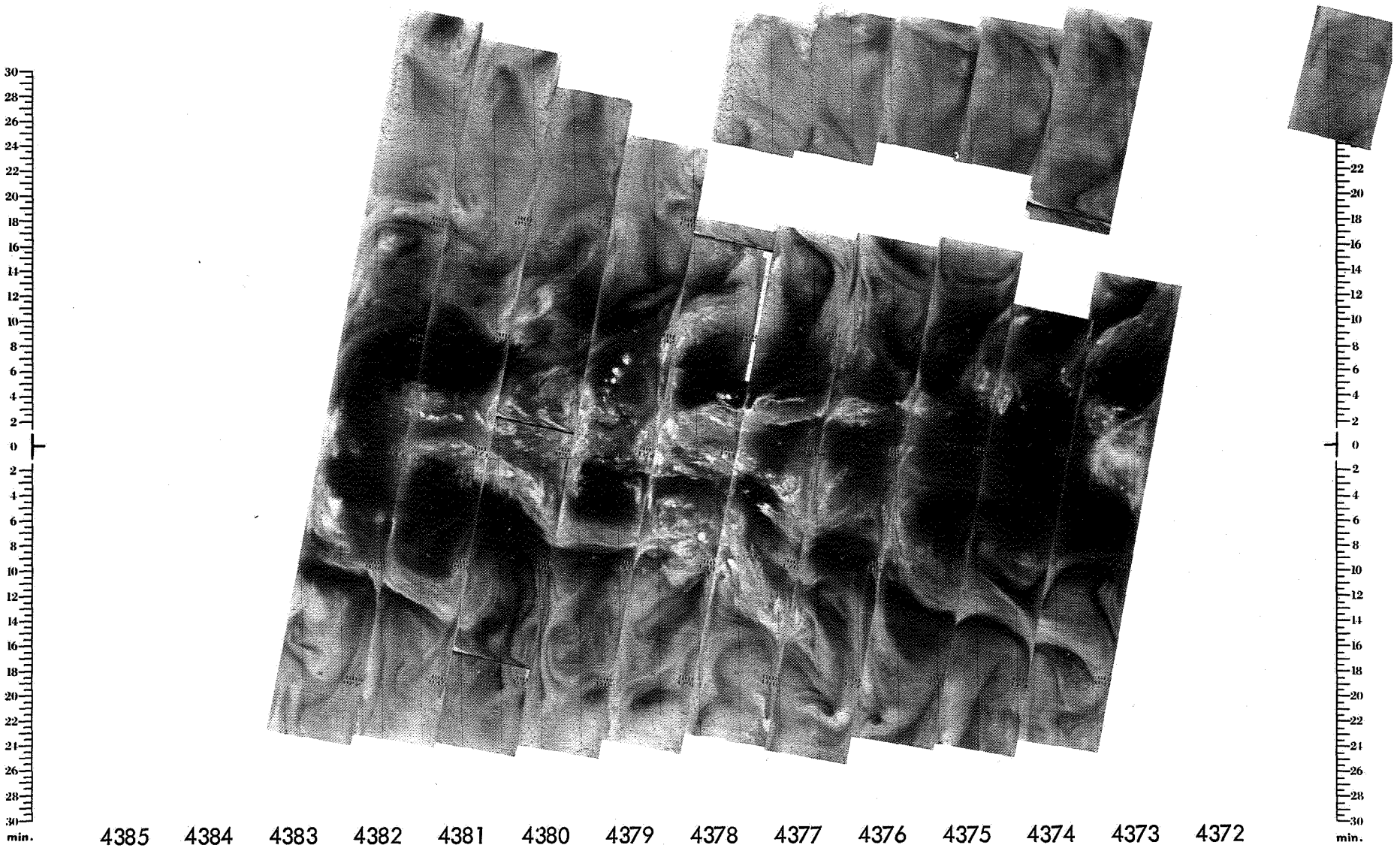
1 NOVEMBER 1973

6.7 μm



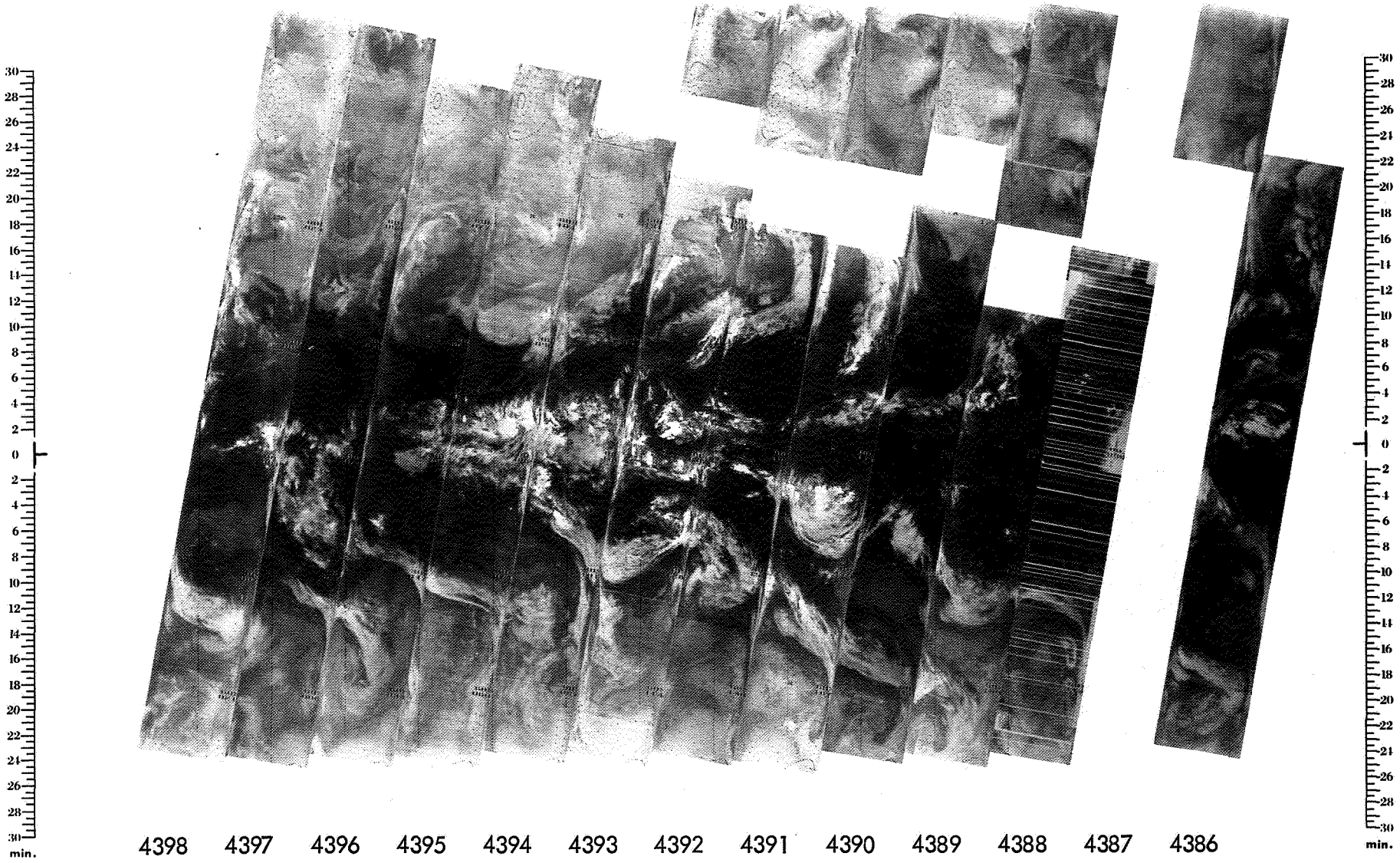
2 NOVEMBER 1973

11.5 μm



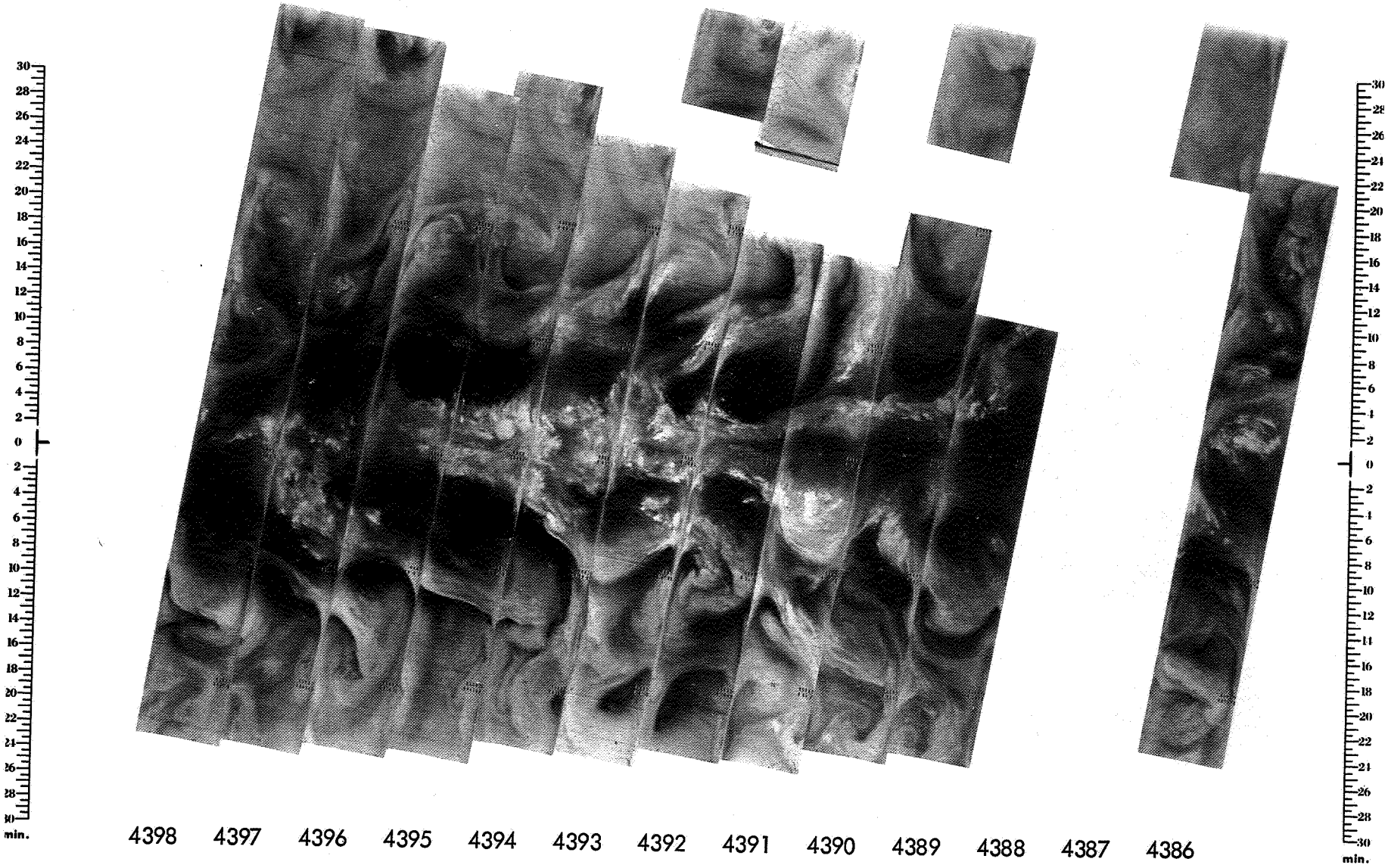
2 NOVEMBER 1973

6.7 μm



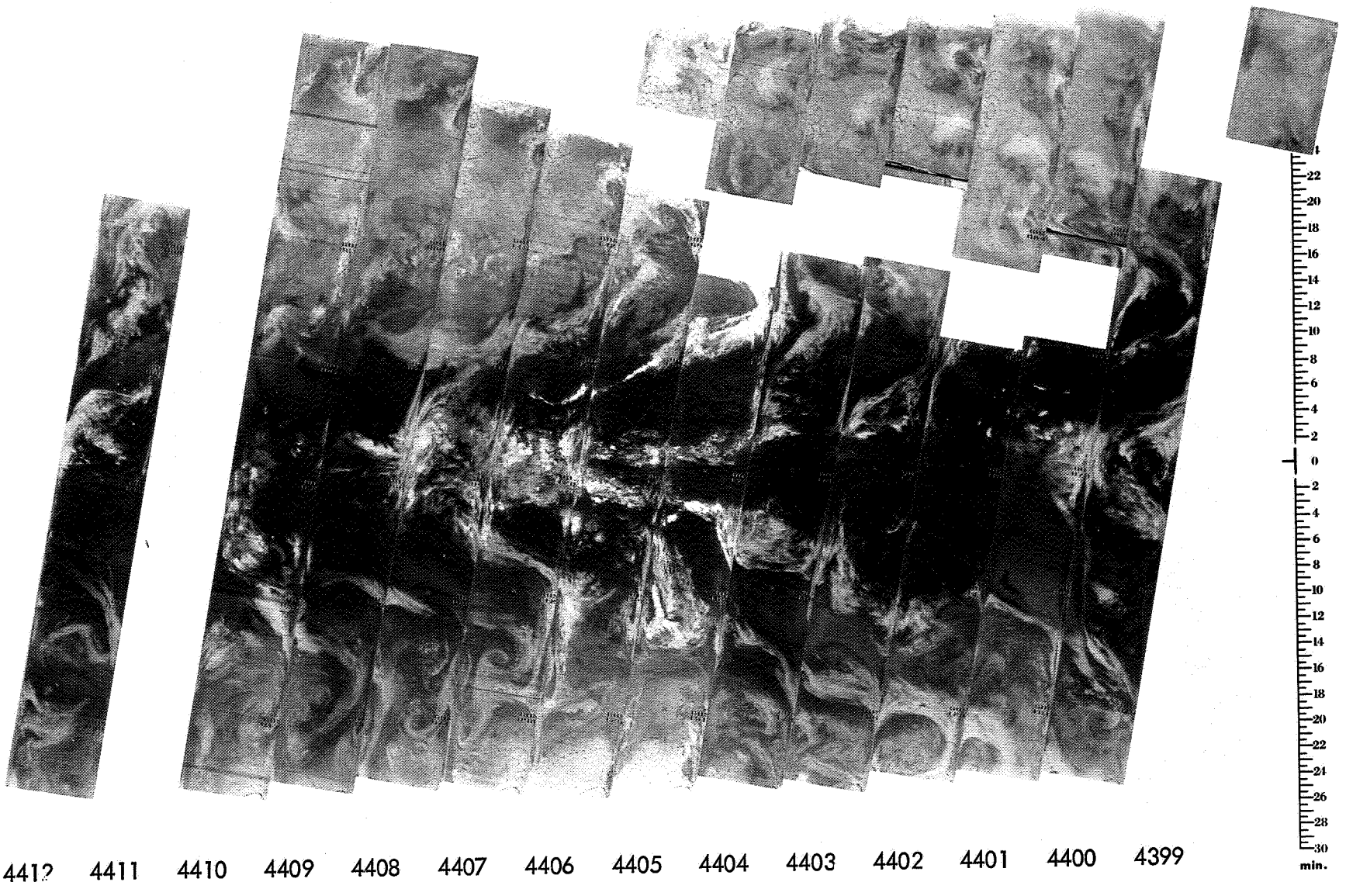
3 NOVEMBER 1973

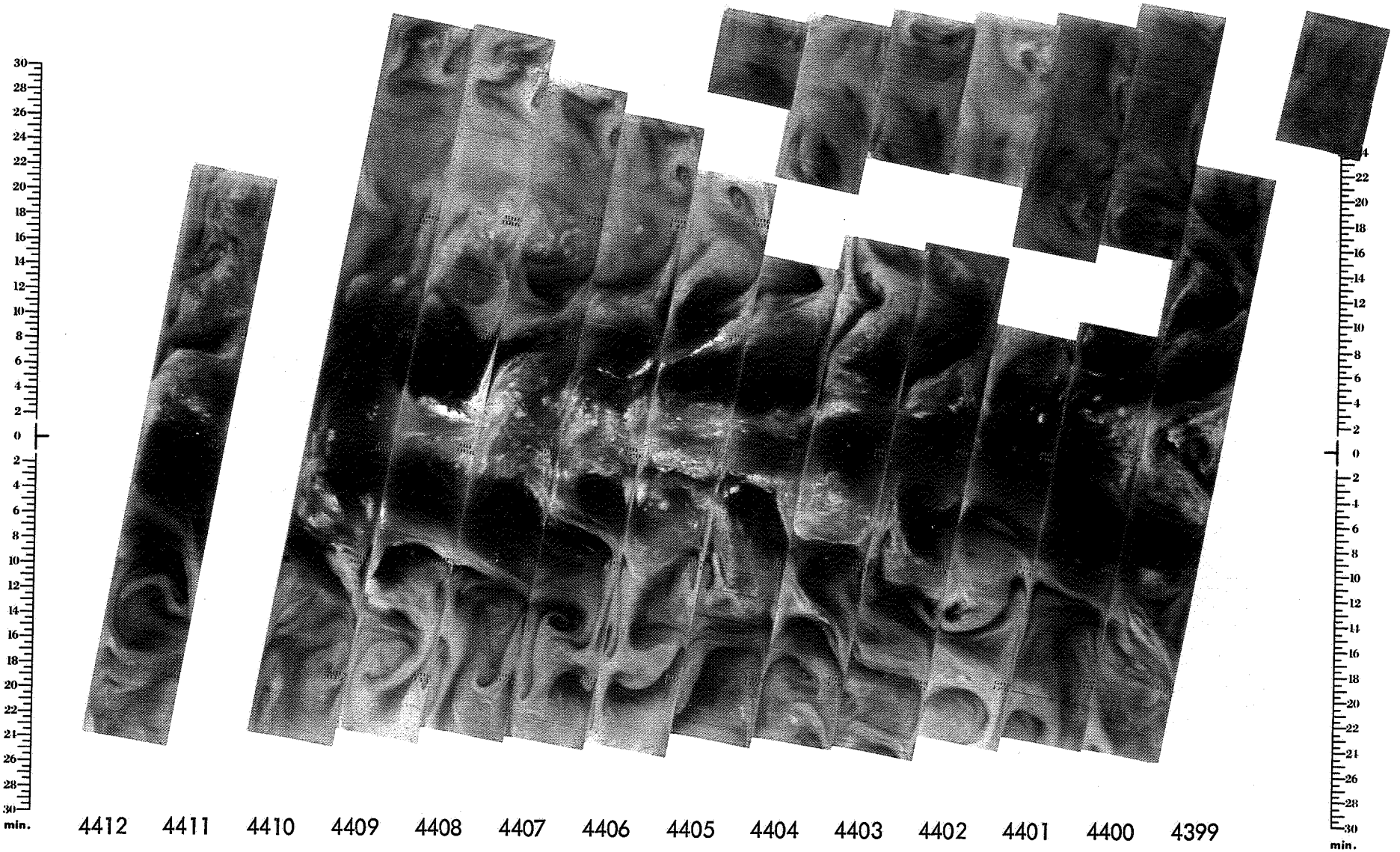
11.5 μm



3 NOVEMBER 1973

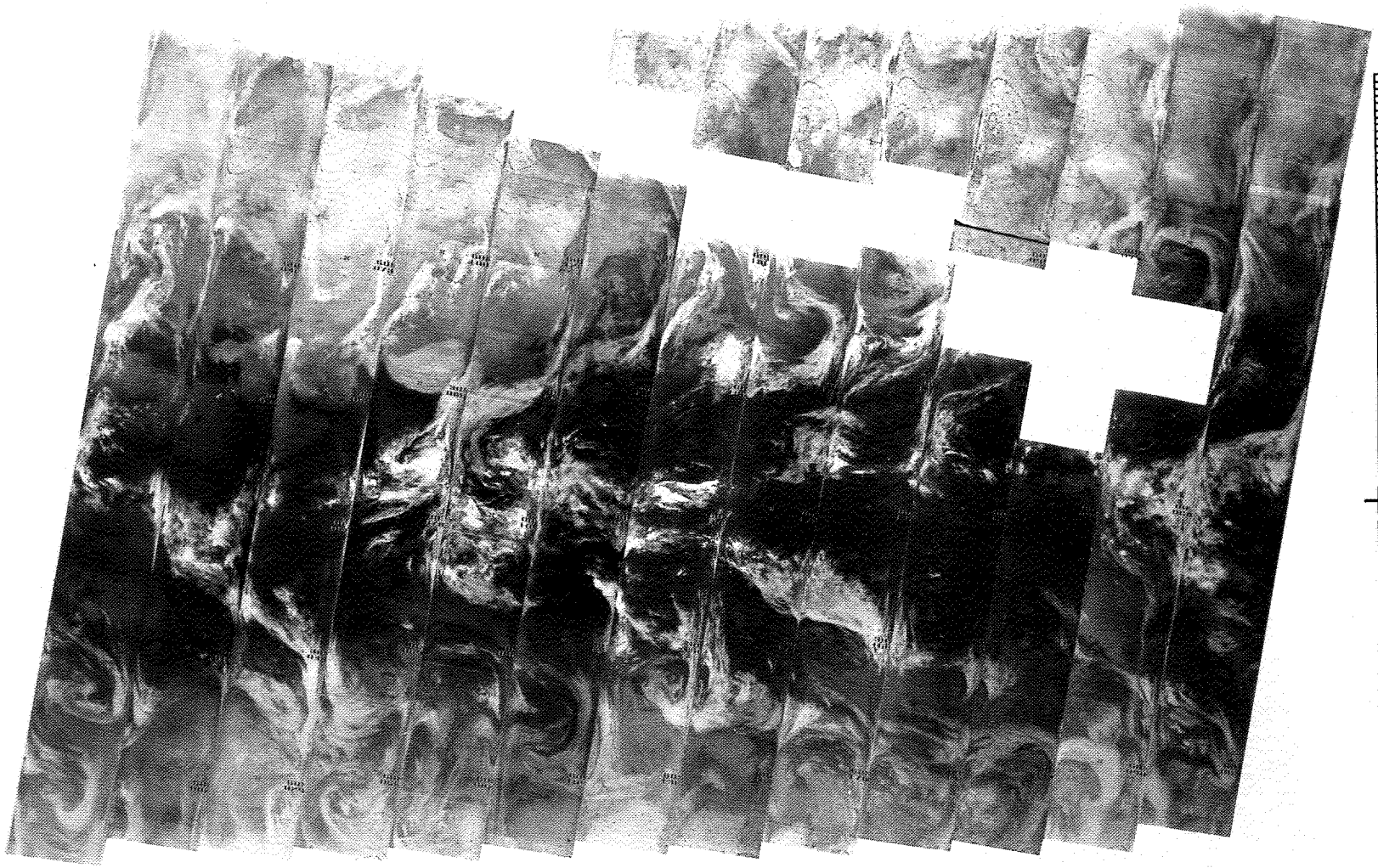
6.7 μm


4412
4411
4410
4409
4408
4407
4406
4405
4404
4403
4402
4401
4400
4399
4 NOVEMBER 1973
11.5 μm
min.
min.



4 NOVEMBER 1973

6.7 μm

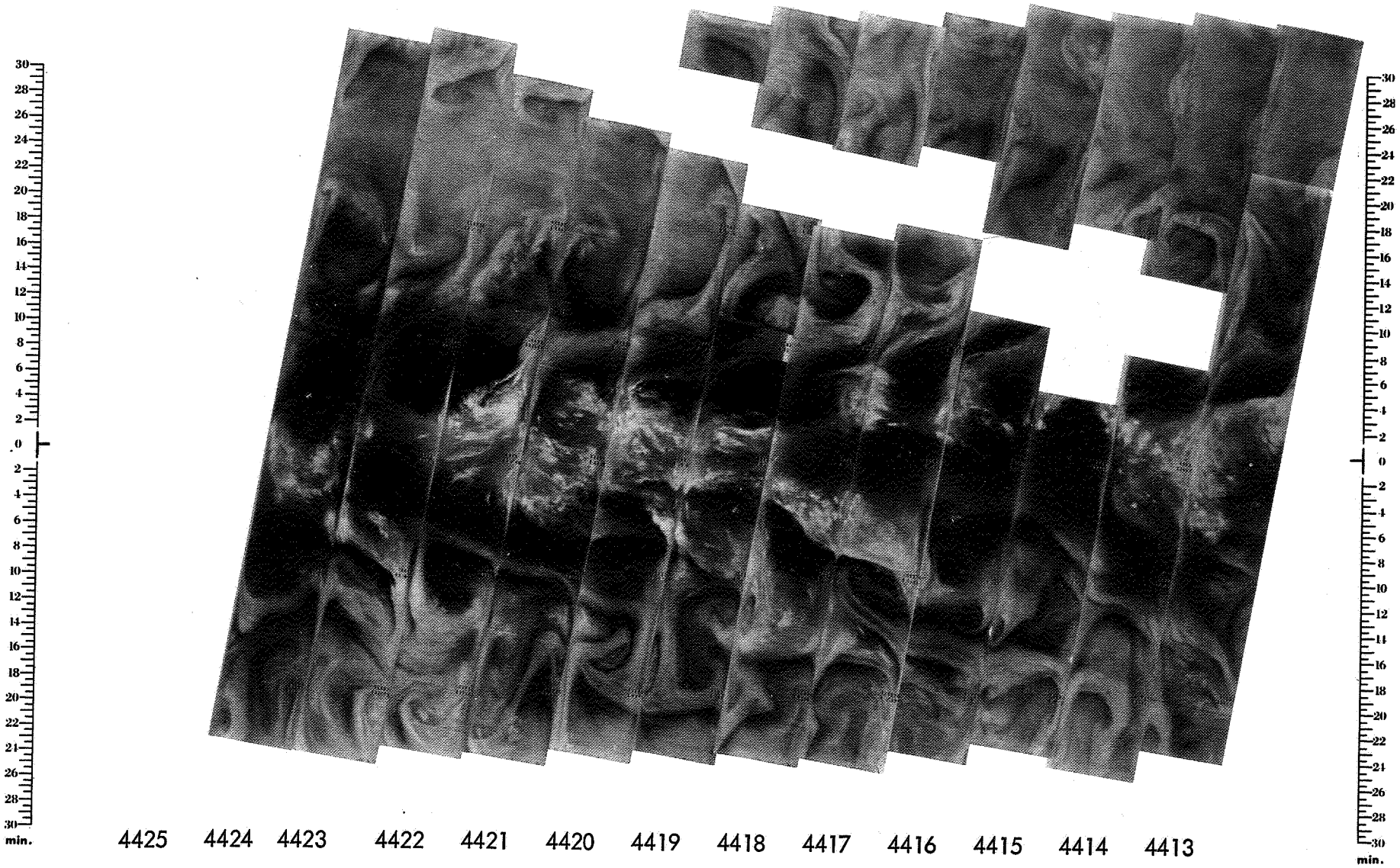


4425 4424 4423 4422 4421 4420 4419 4418 4417 4416 4415 4414 4413

5 NOVEMBER 1973

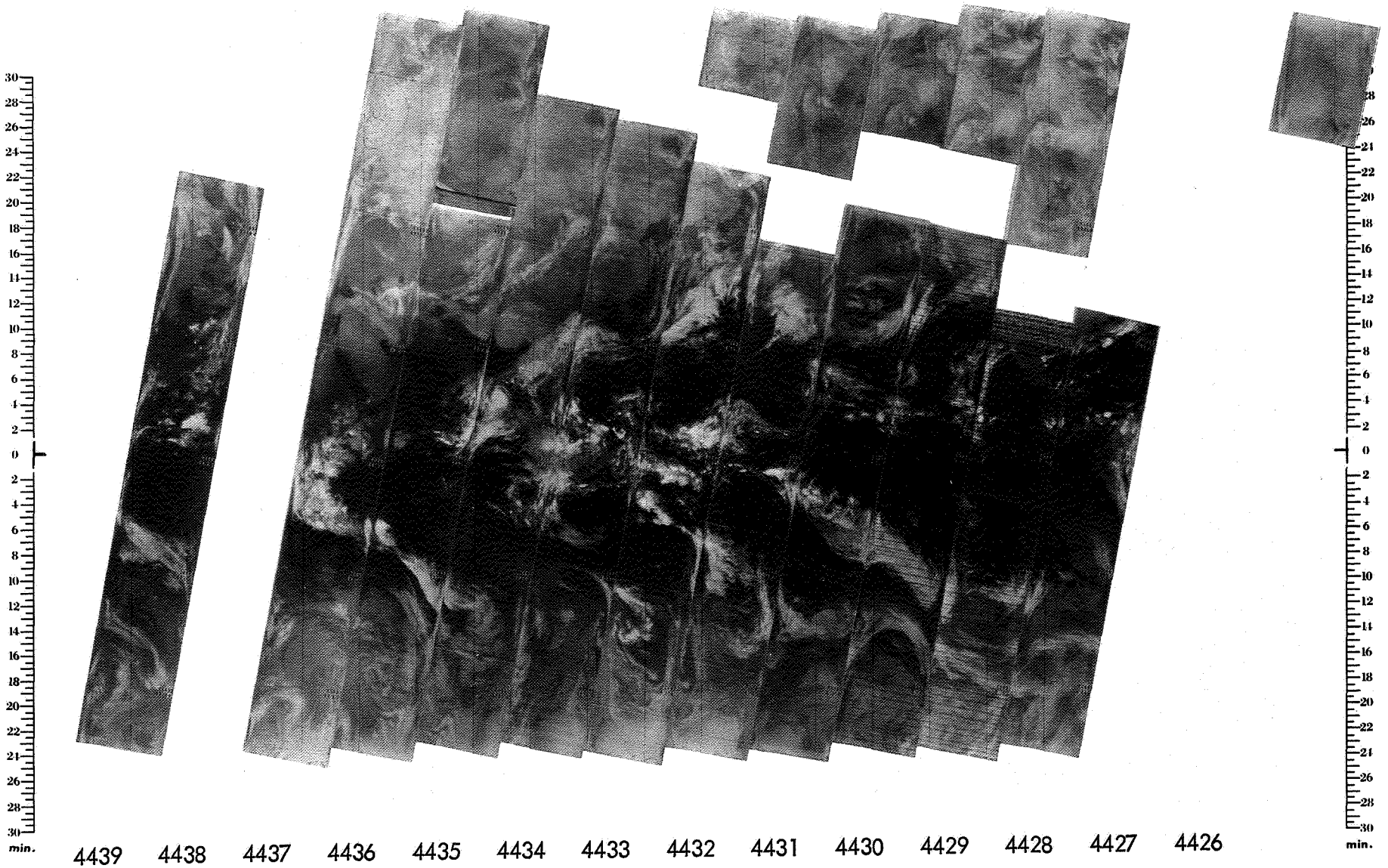
11.5 μm

min.



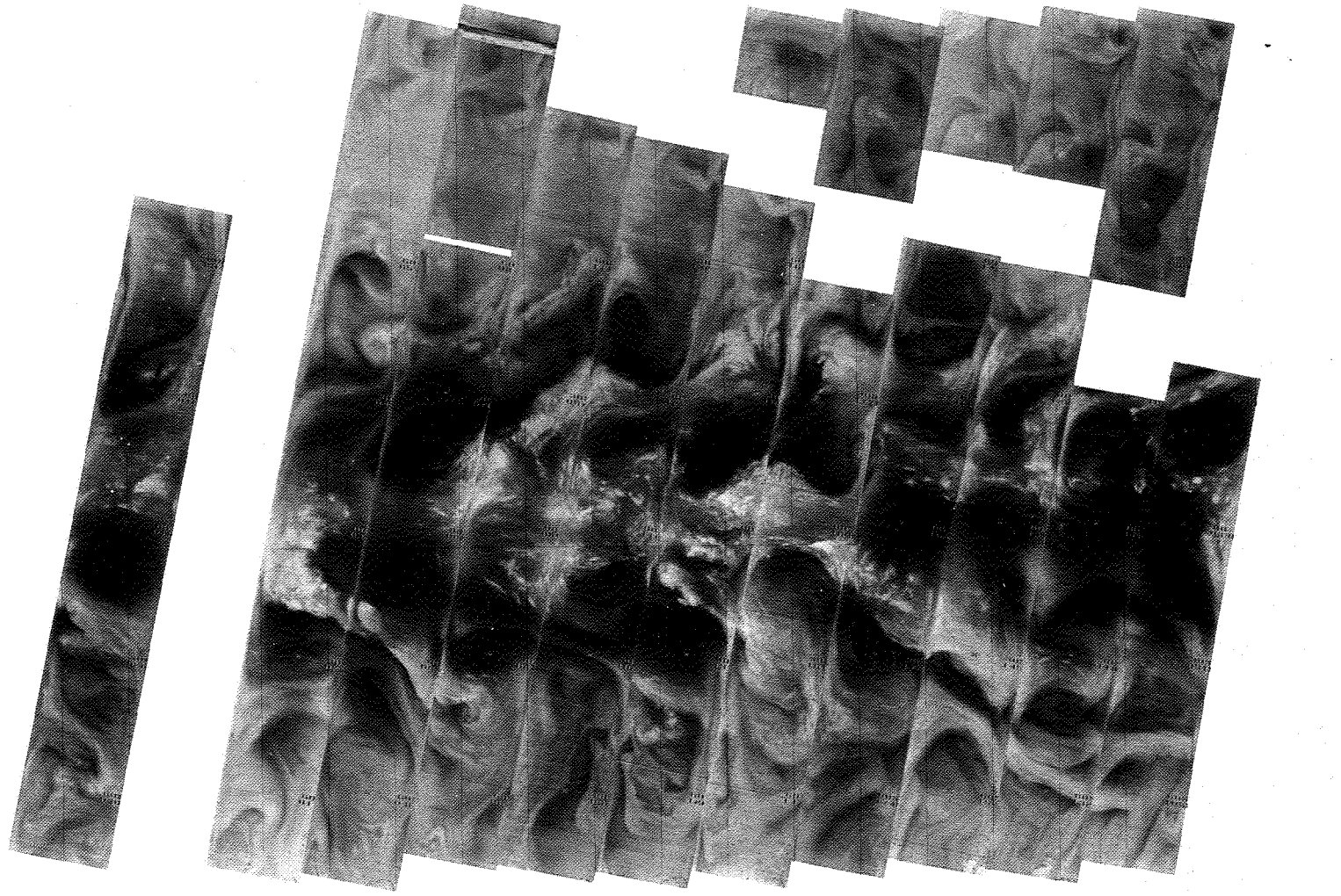
5 NOVEMBER 1973

6.7 μm



6 NOVEMBER 1973

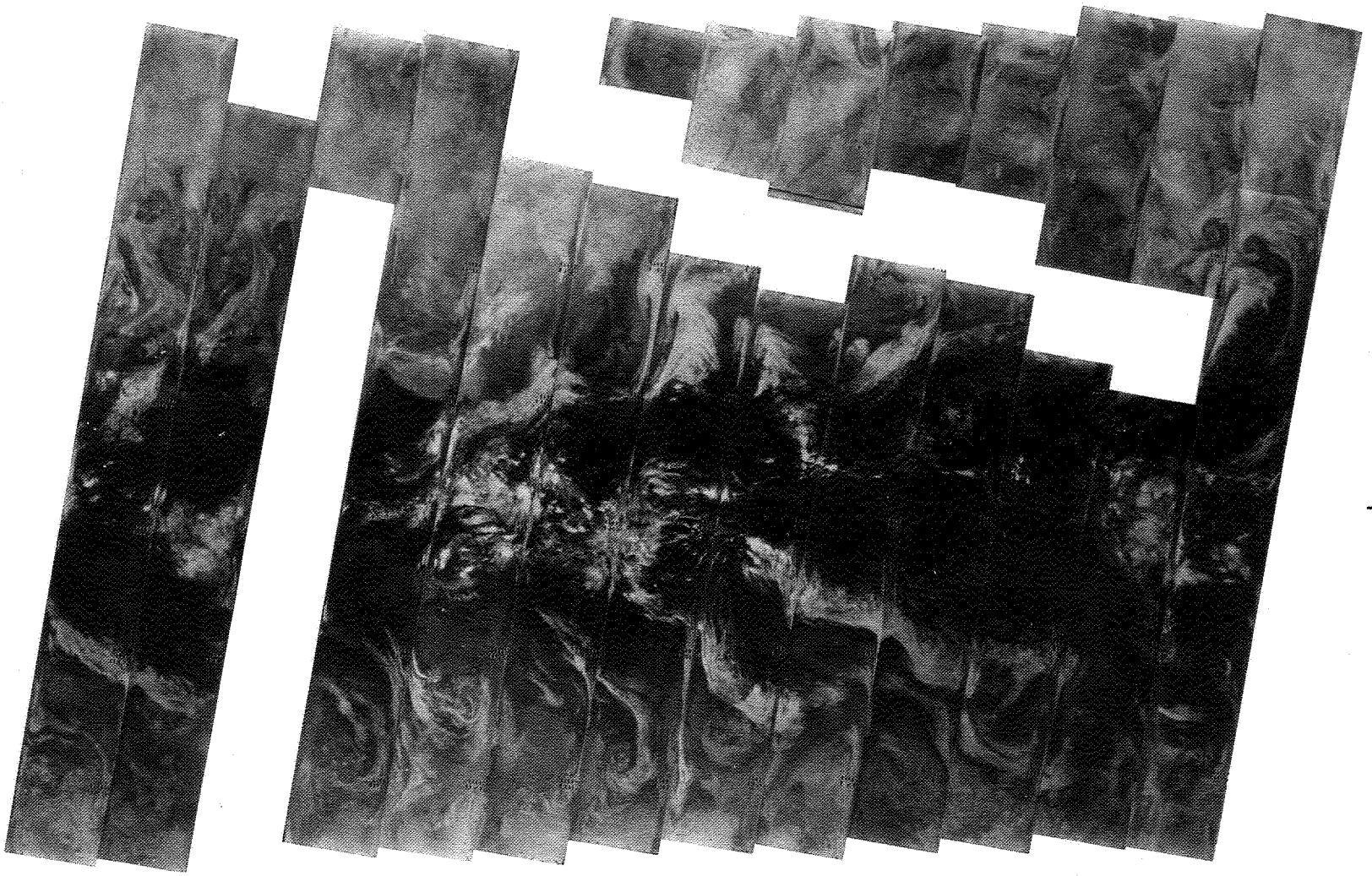
11.5 μm



4439 4438 4437 4436 4435 4434 4433 4432 4431 4430 4429 4428 4427 4426

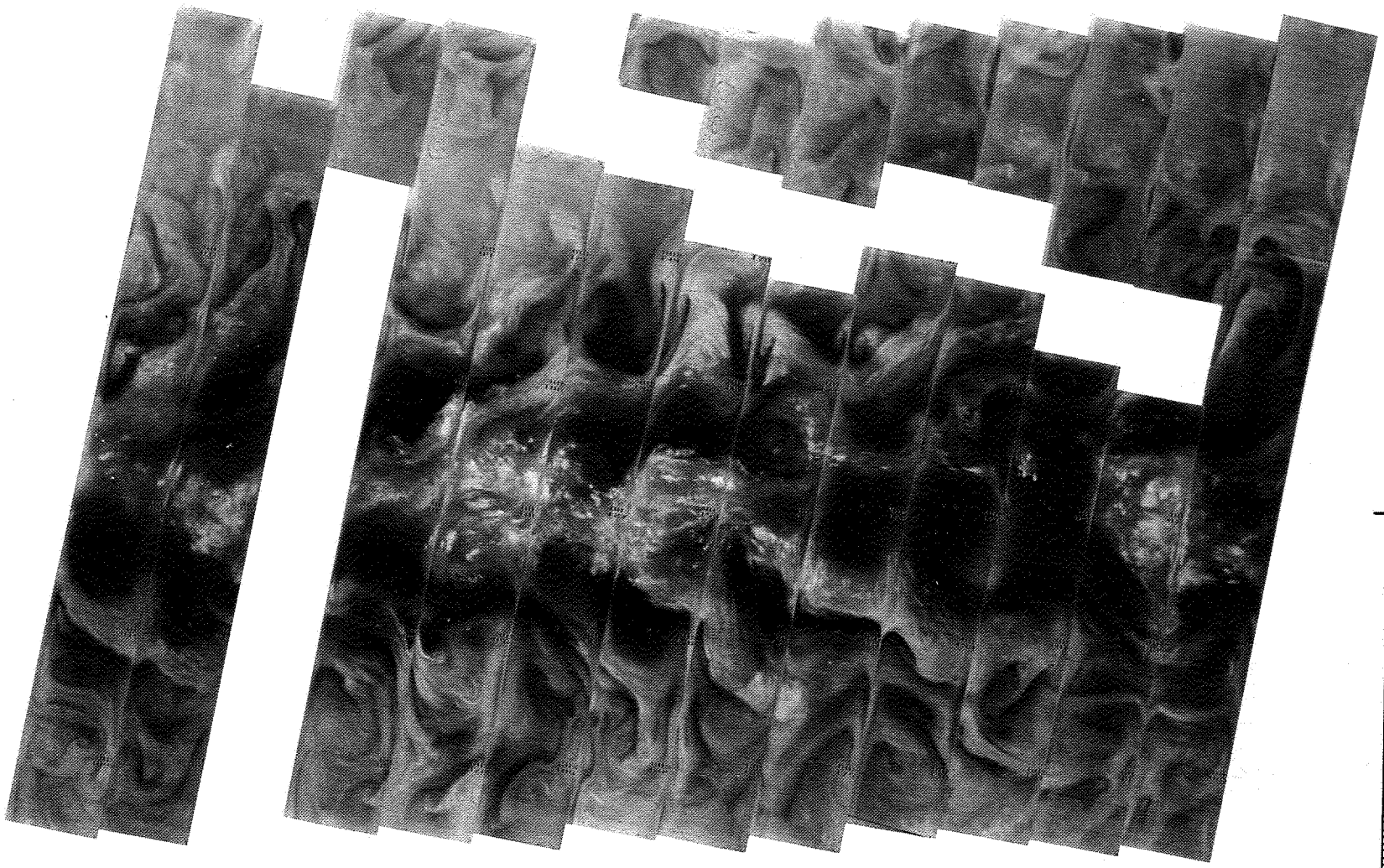
6 NOVEMBER 1973

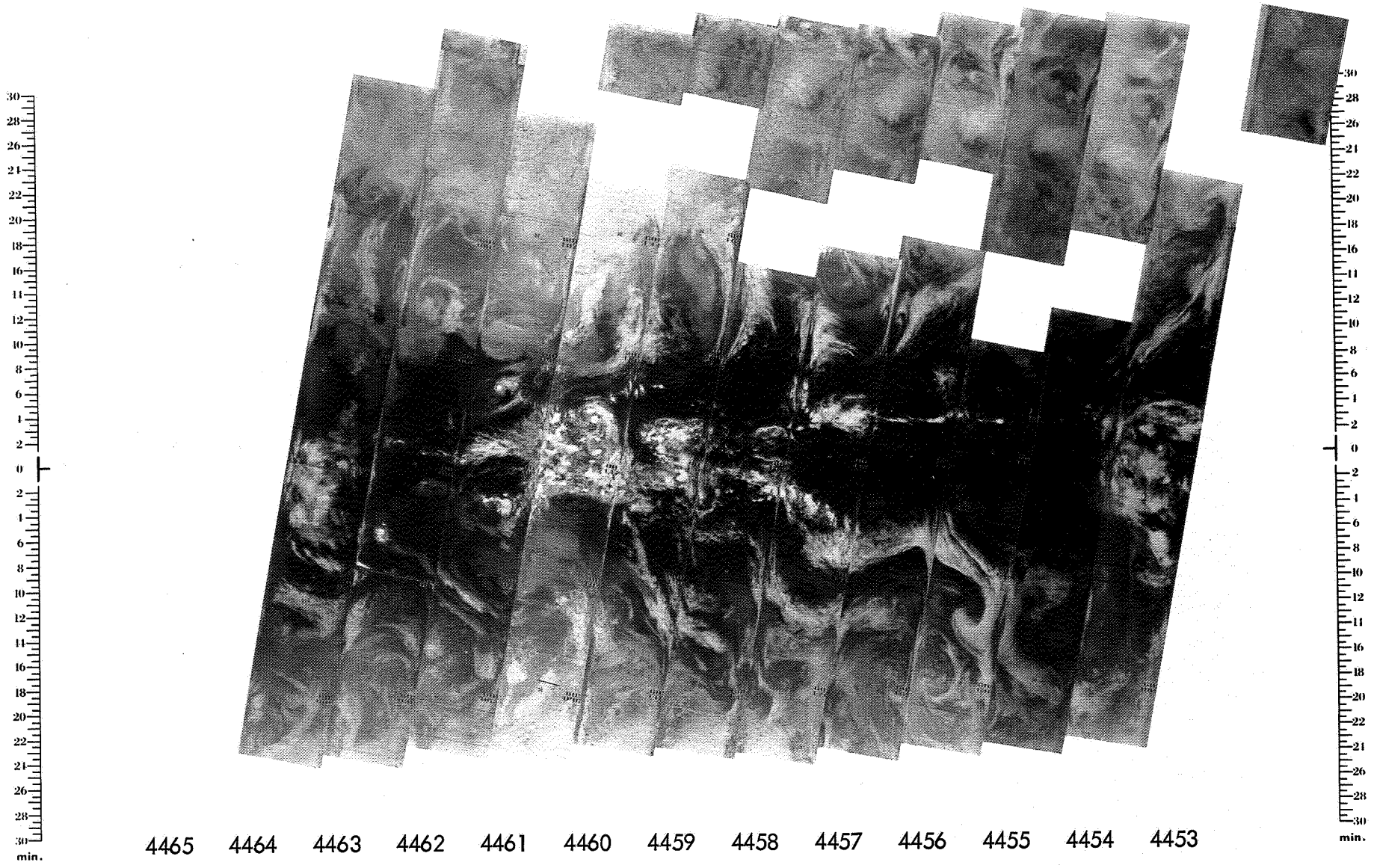
6.7 μm



7 NOVEMBER 1973

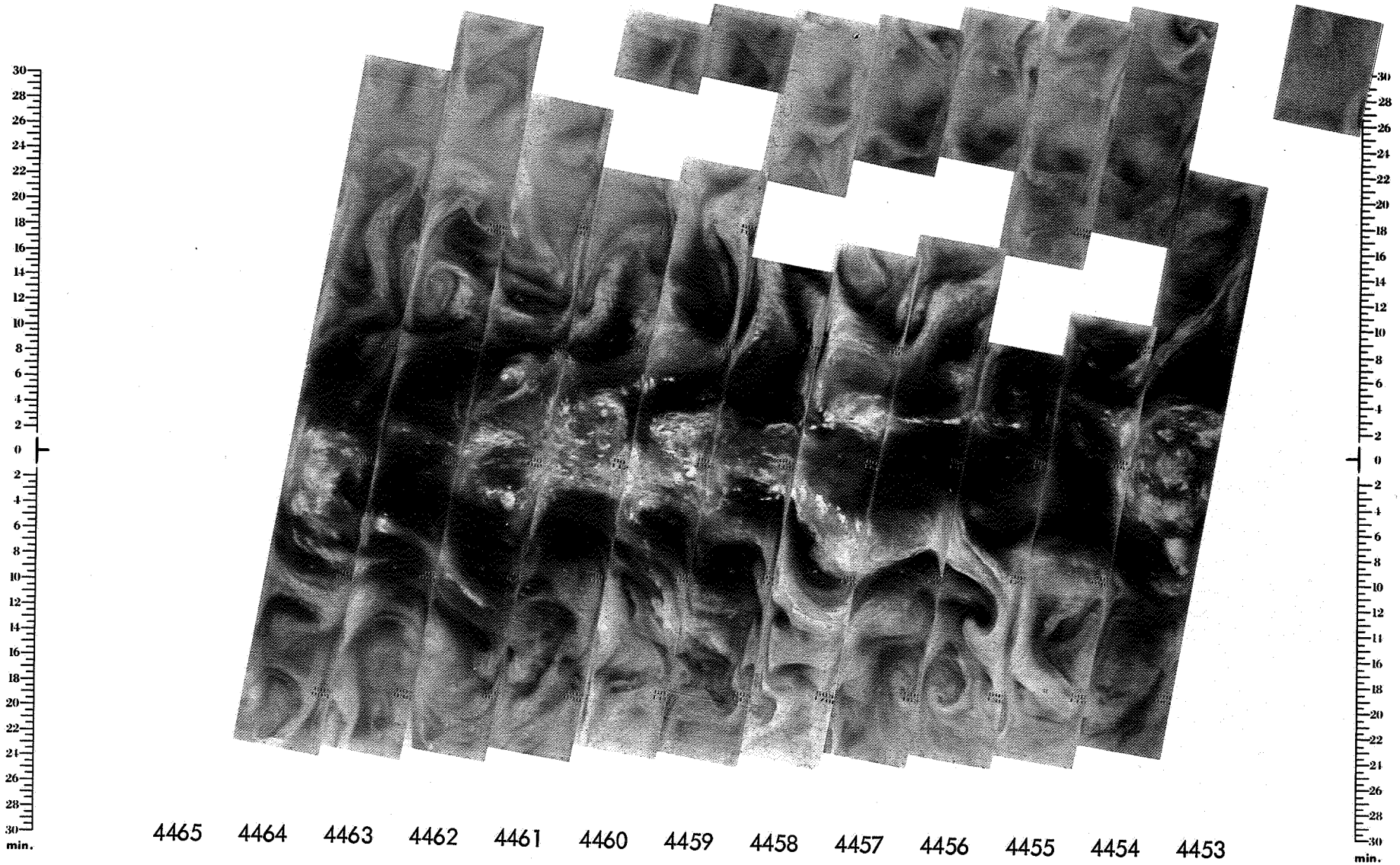
11.5 μm

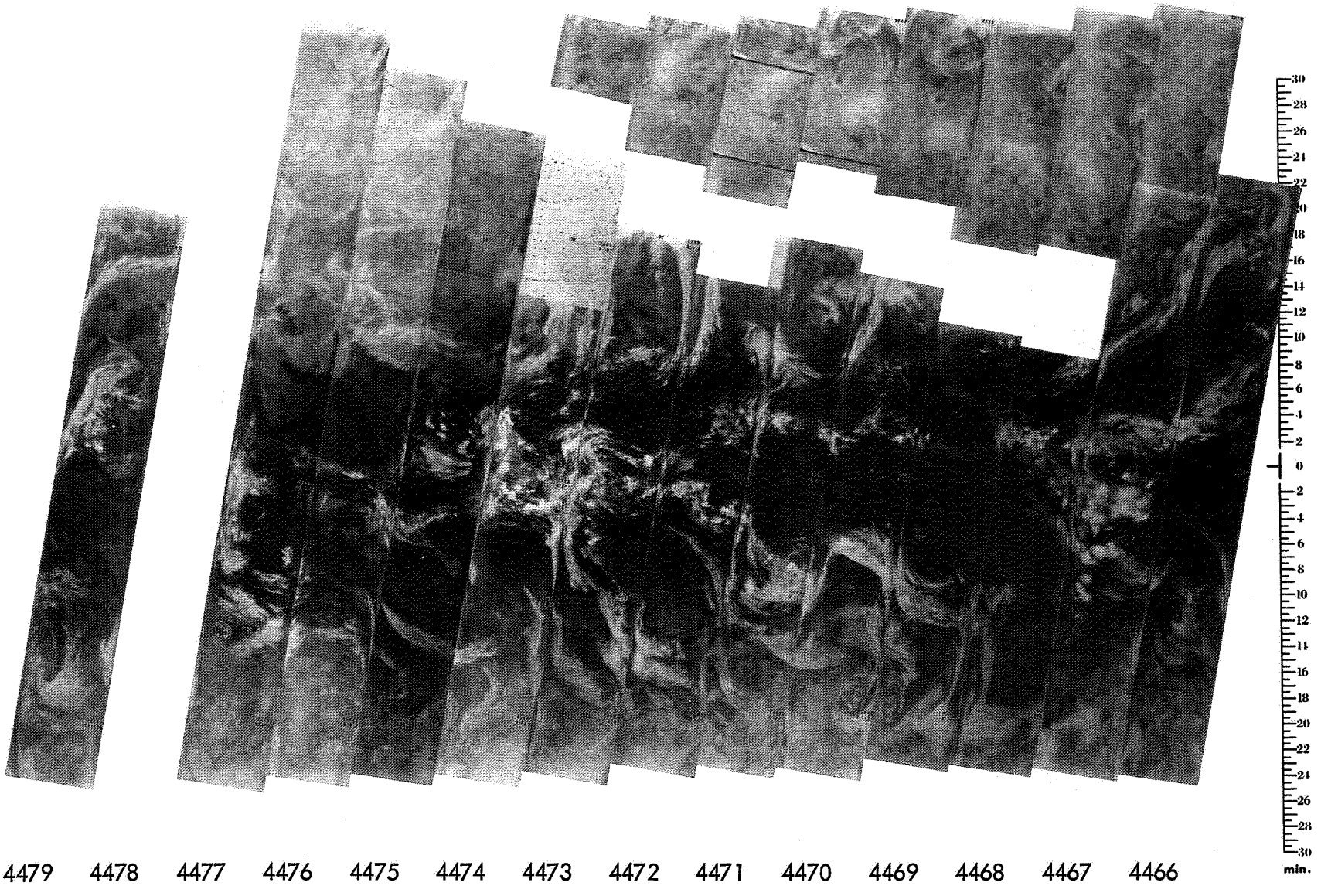

4452 4451 4450 4449 4448 4447 4446 4445 4444 4443 4442 4441 4440
7 NOVEMBER 1973
6.7 μm
min.
min.



8 NOVEMBER 1973

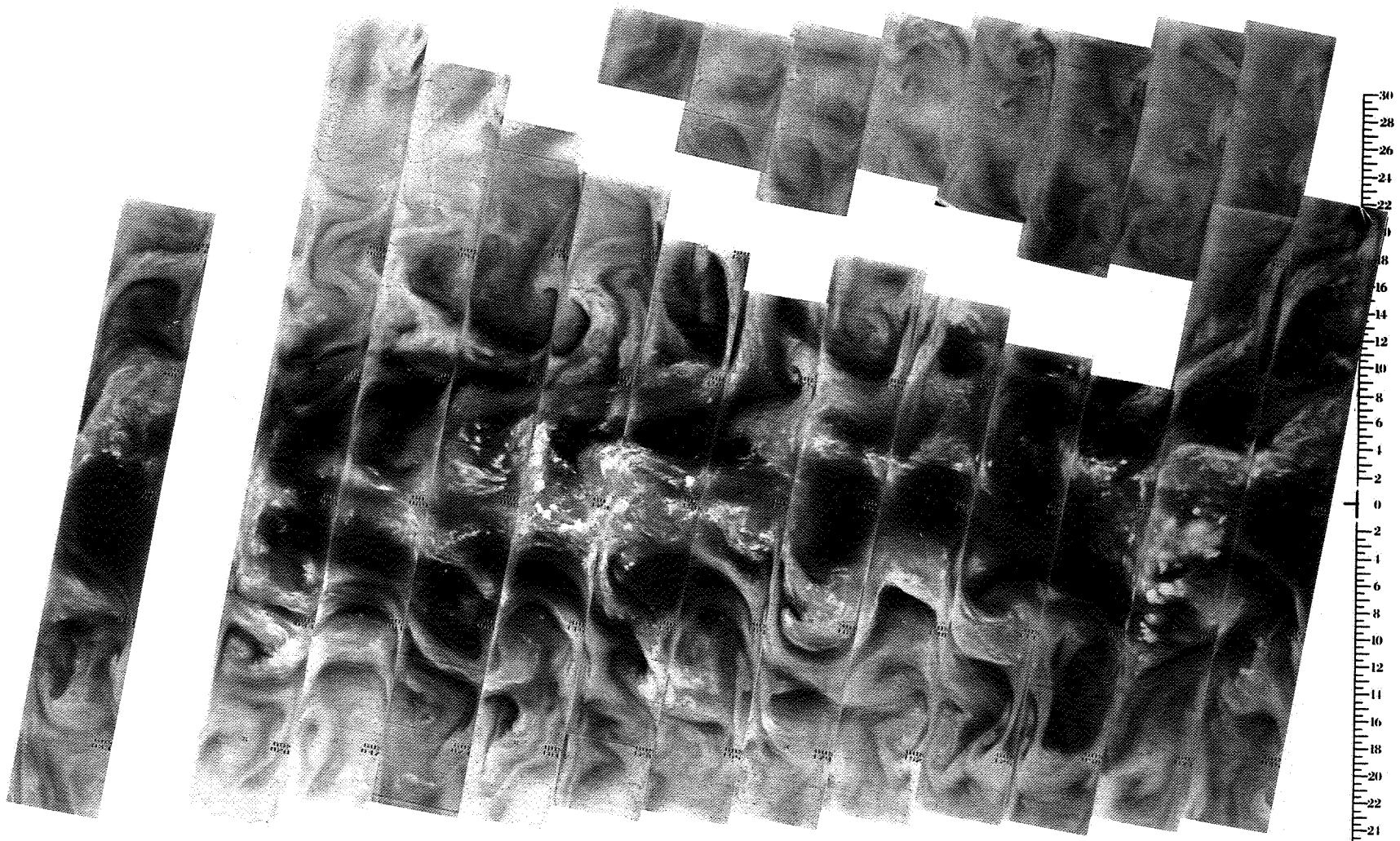
11.5 μm


4465 4464 4463 4462 4461 4460 4459 4458 4457 4456 4455 4454 4453
8 NOVEMBER 1973
6.7 μm
min.
min.



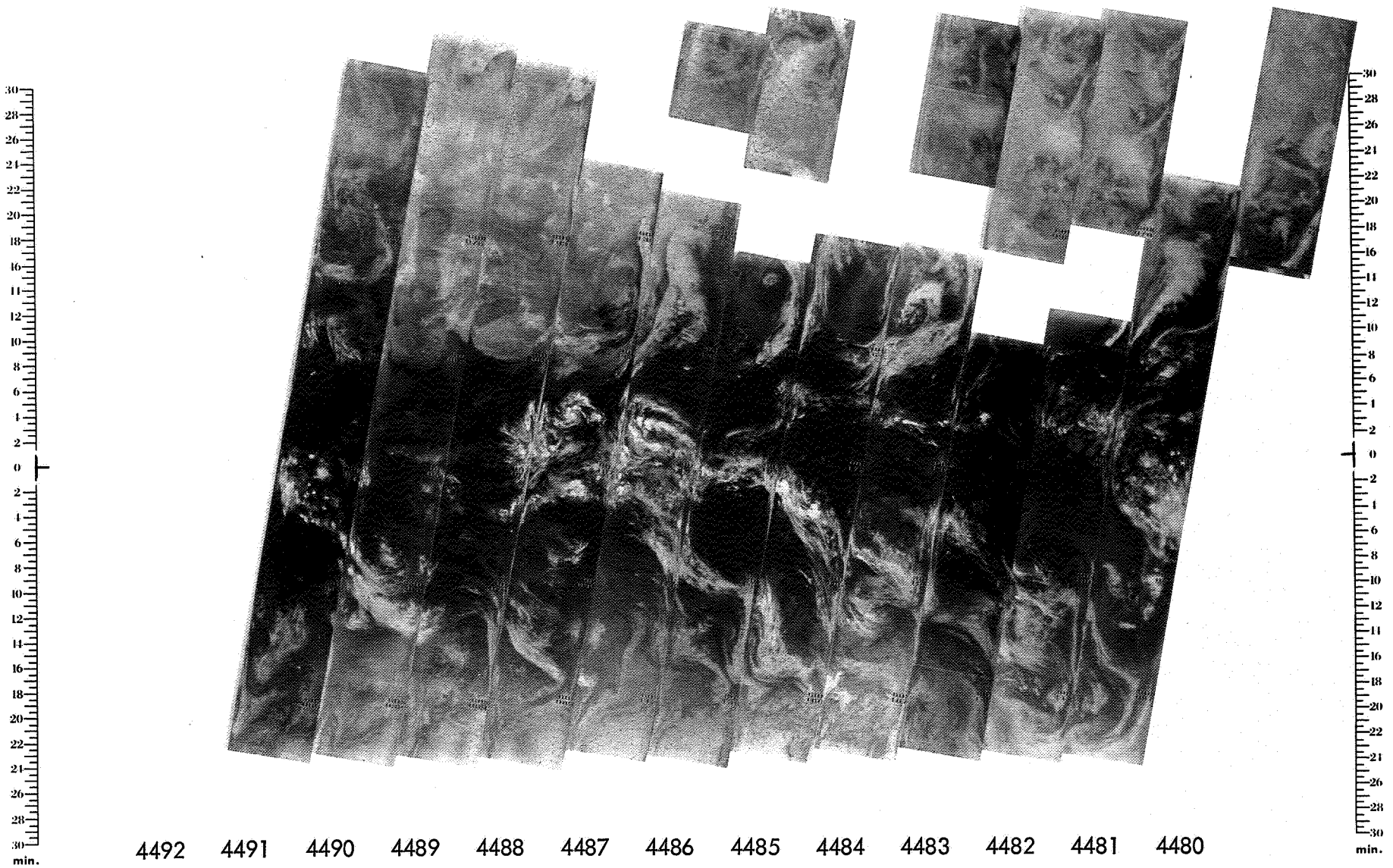
9 NOVEMBER 1973

11.5 μm



9 NOVEMBER 1973

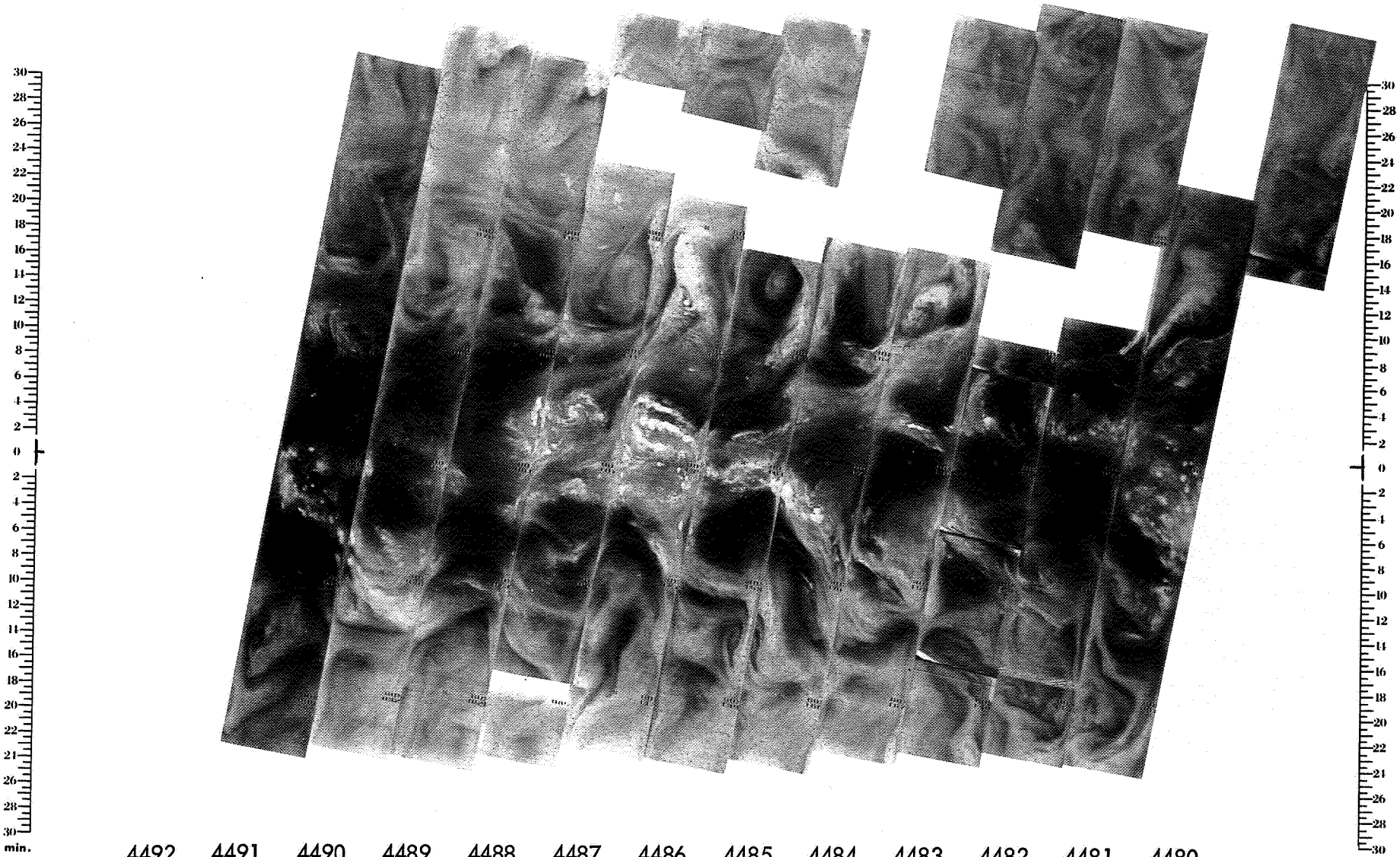
6.7 μm



4492 4491 4490 4489 4488 4487 4486 4485 4484 4483 4482 4481 4480

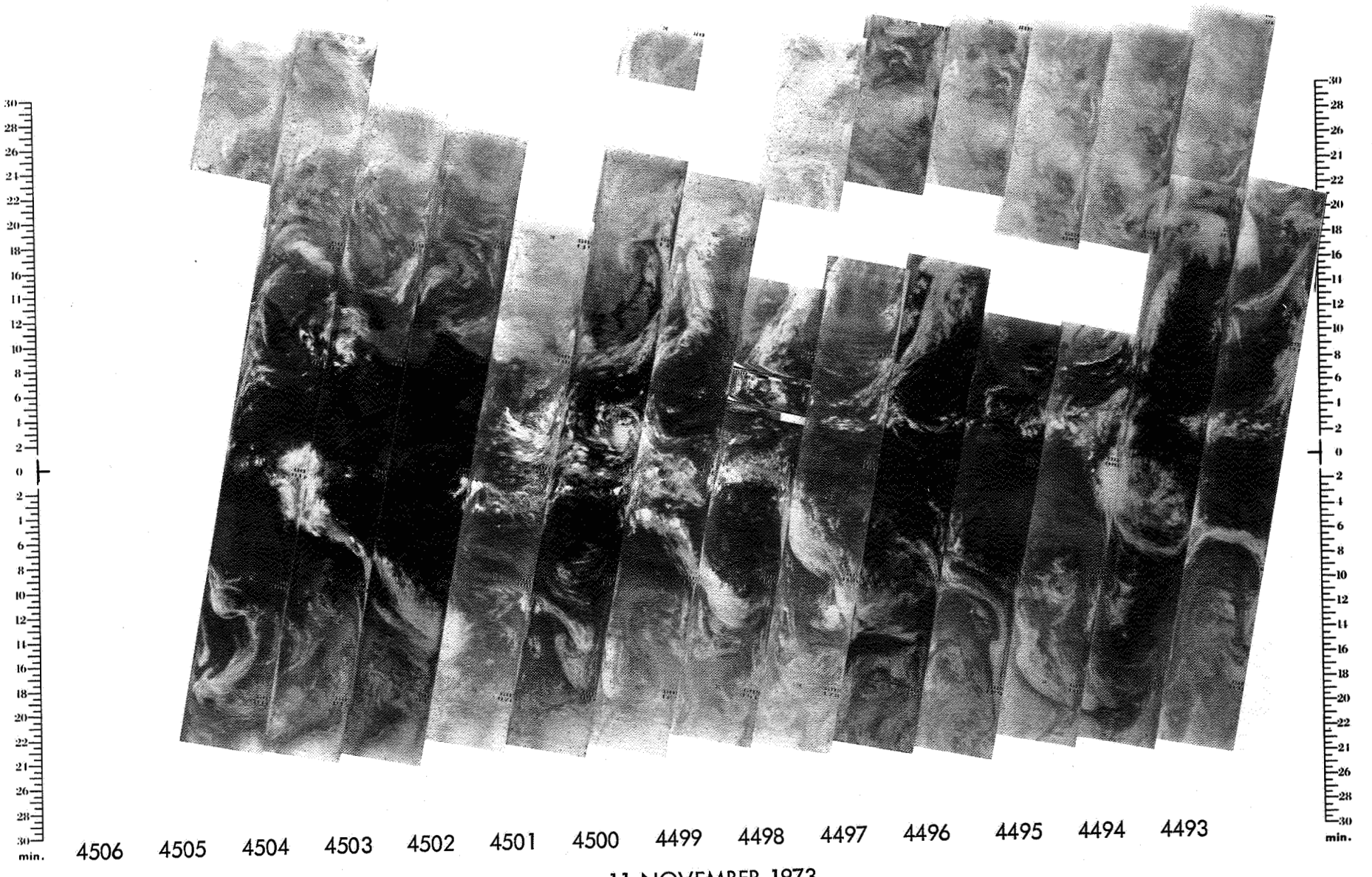
10 NOVEMBER 1973

11.5 μm



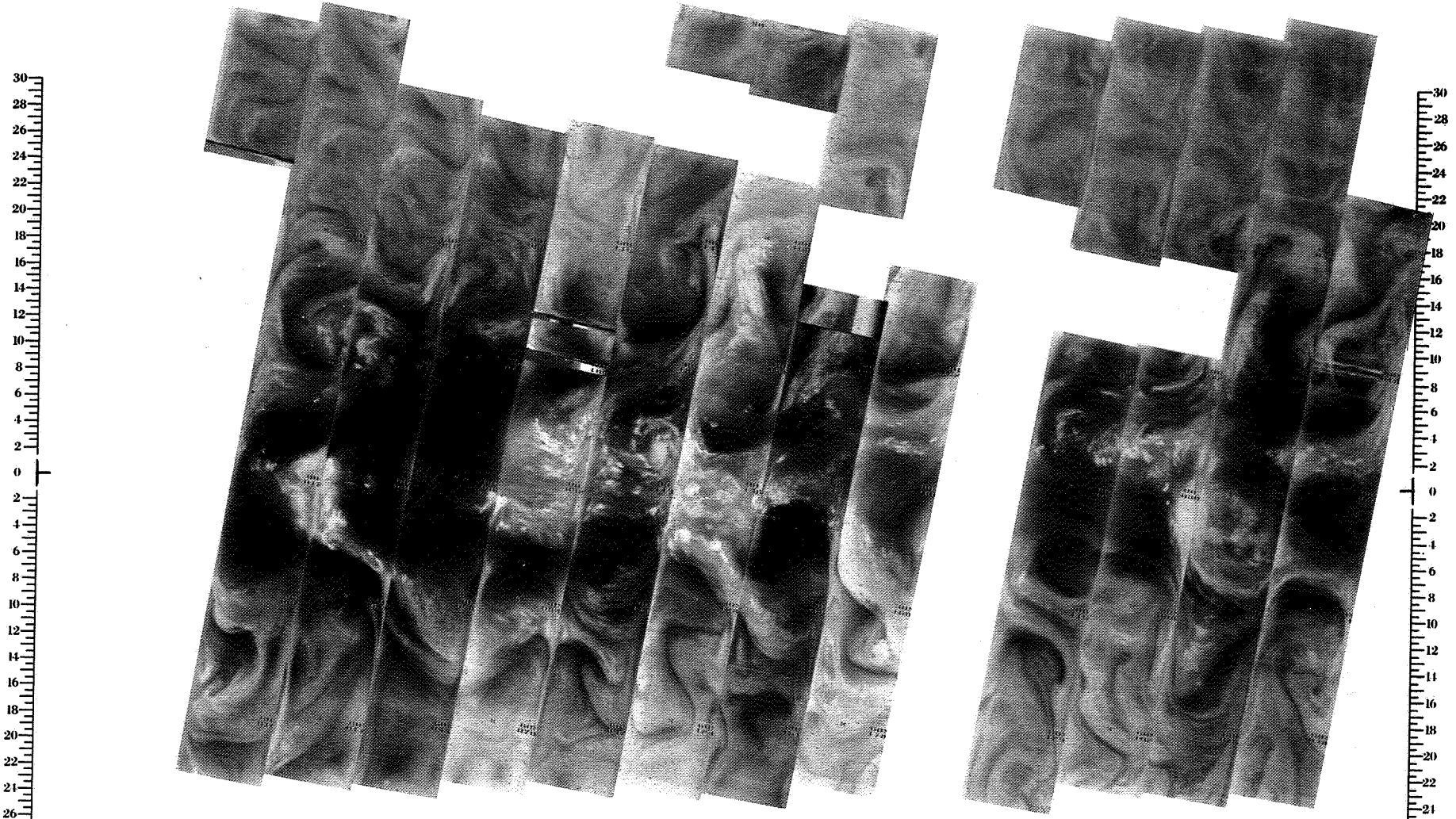
10 NOVEMBER 1973

6.7 μm



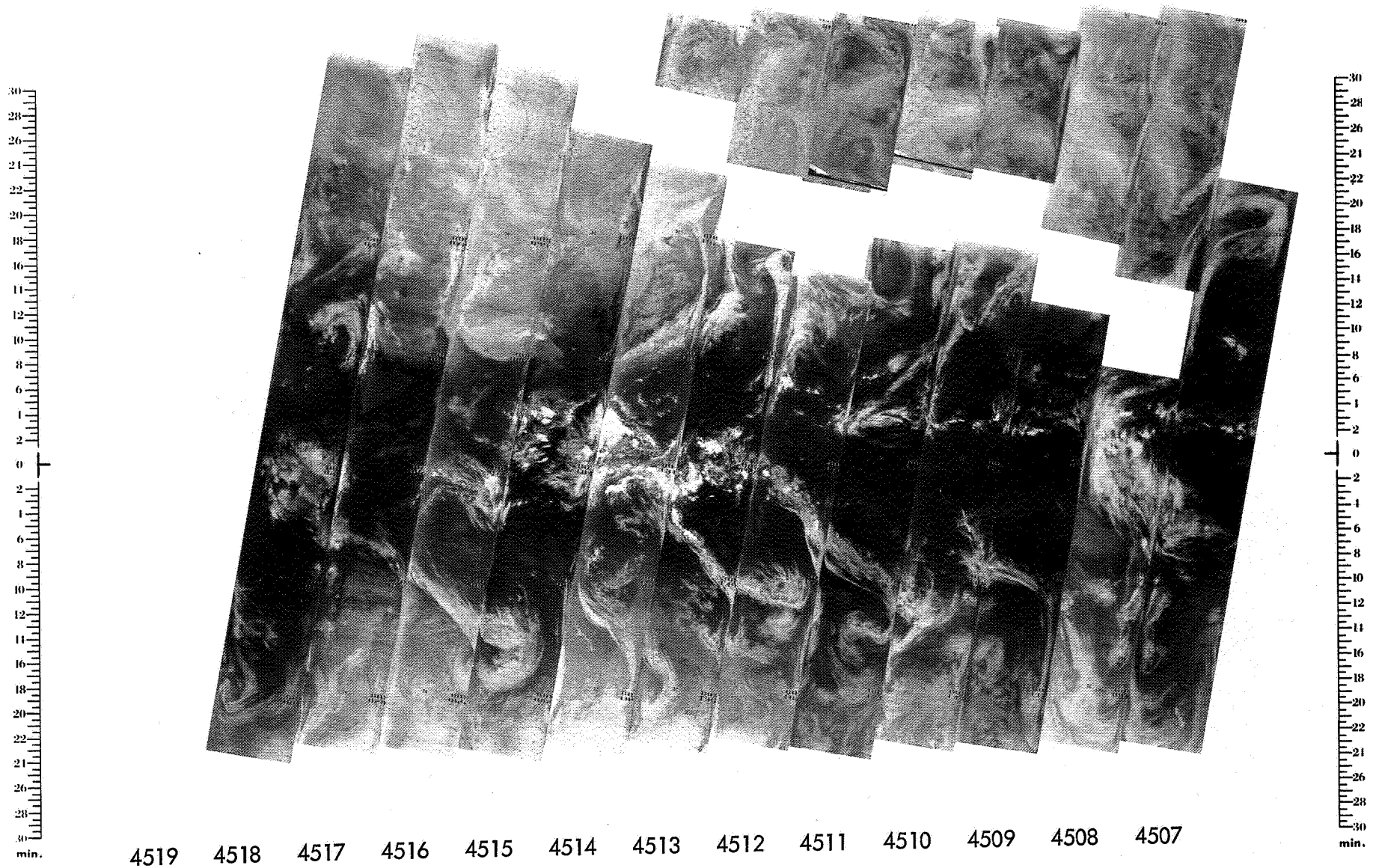
11 NOVEMBER 1973

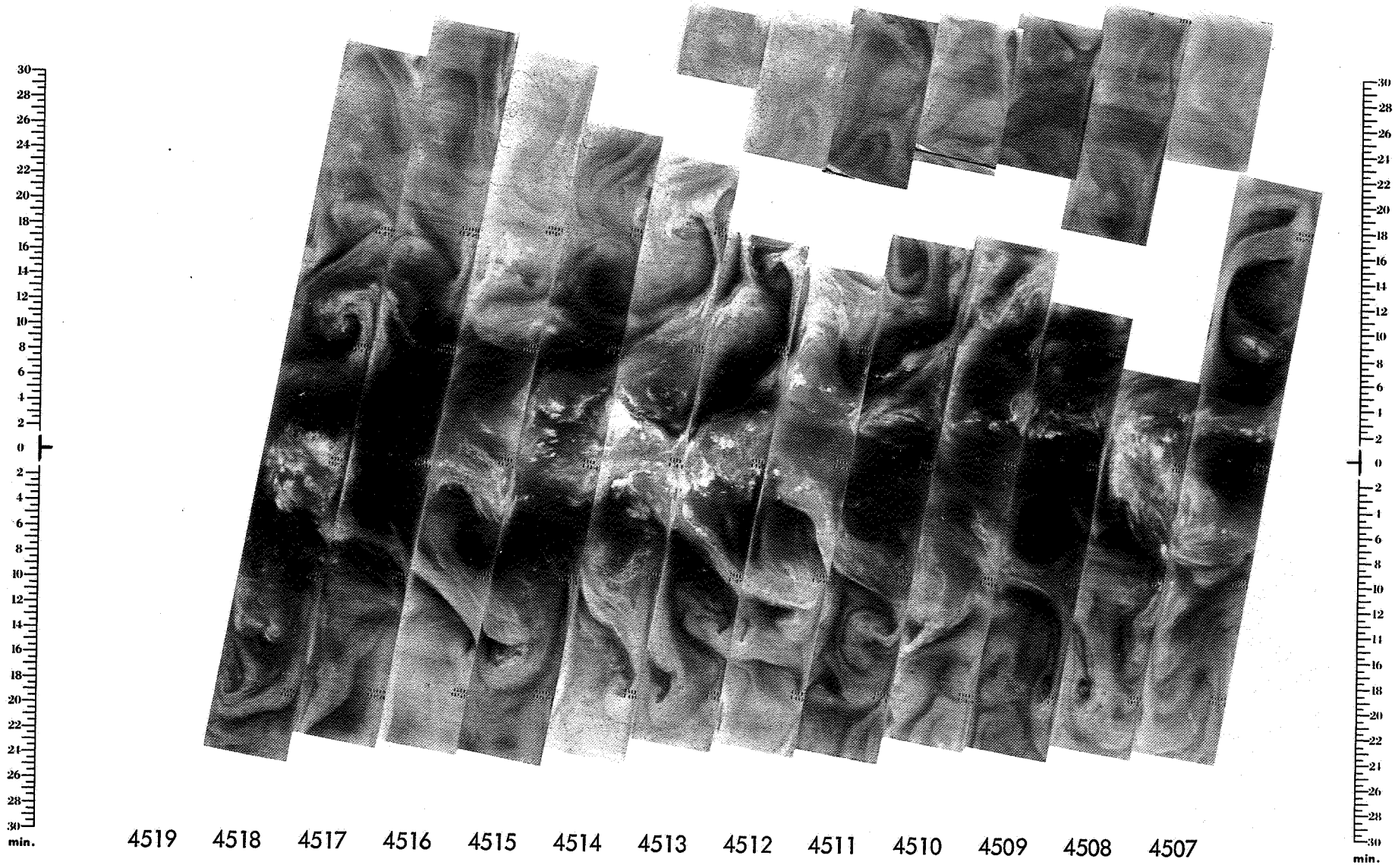
11.5 μm

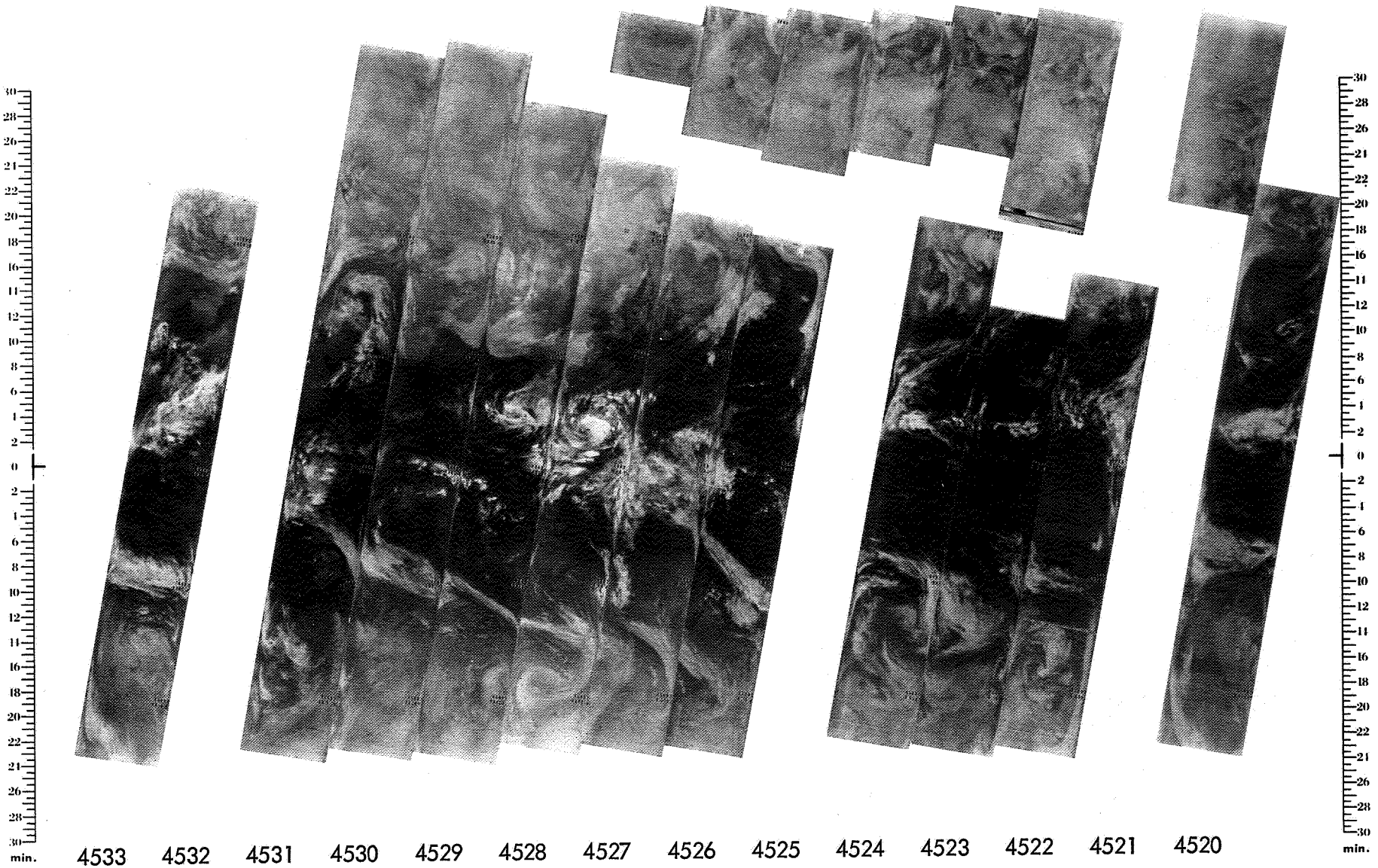


11 NOVEMBER 1973

6.7 μm

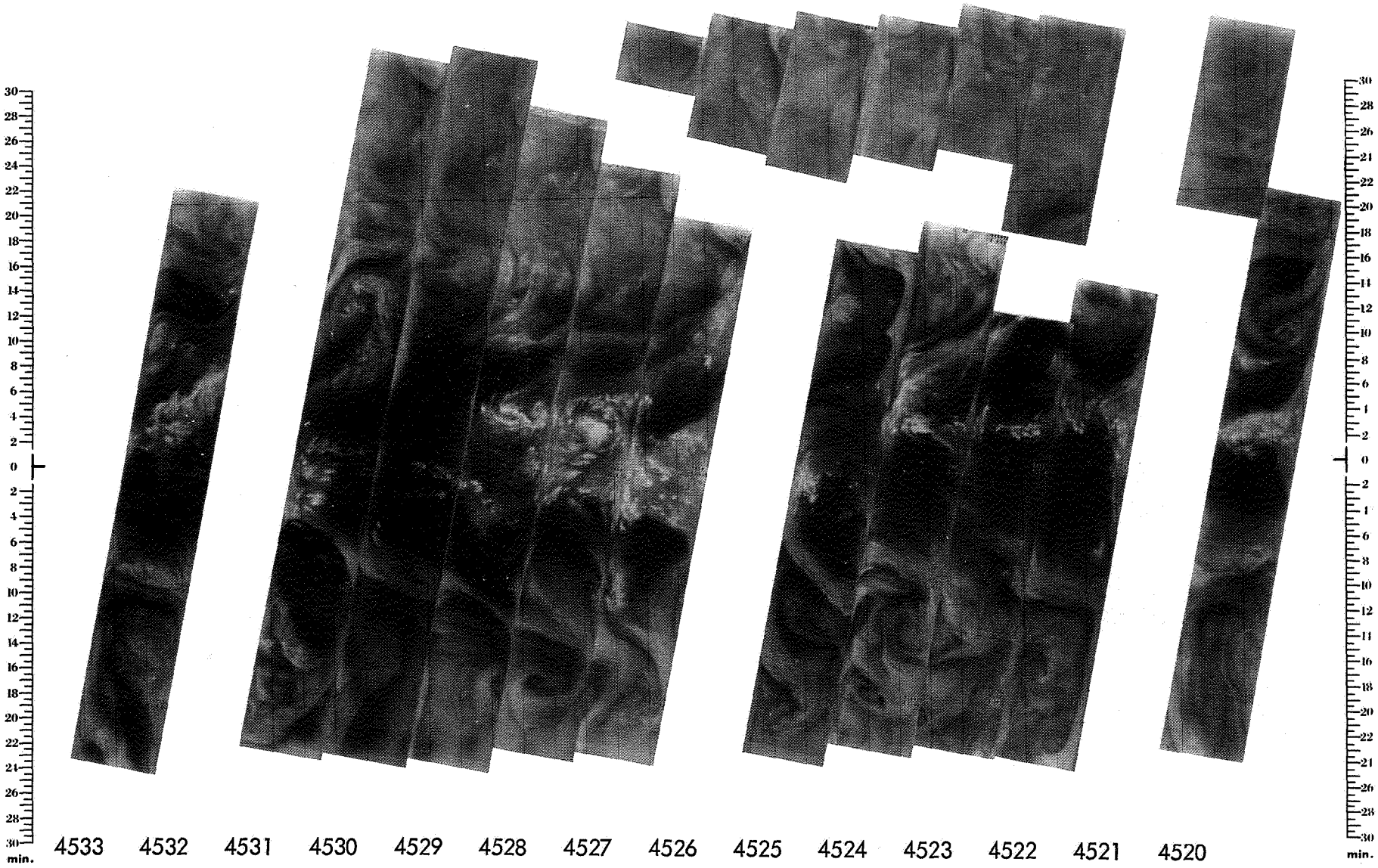

4519 4518 4517 4516 4515 4514 4513 4512 4511 4510 4509 4508 4507
12 NOVEMBER 1973
11.5 μm
min.
min.


4519 4518 4517 4516 4515 4514 4513 4512 4511 4510 4509 4508 4507
12 NOVEMBER 1973
6.7 μm
min.
min.



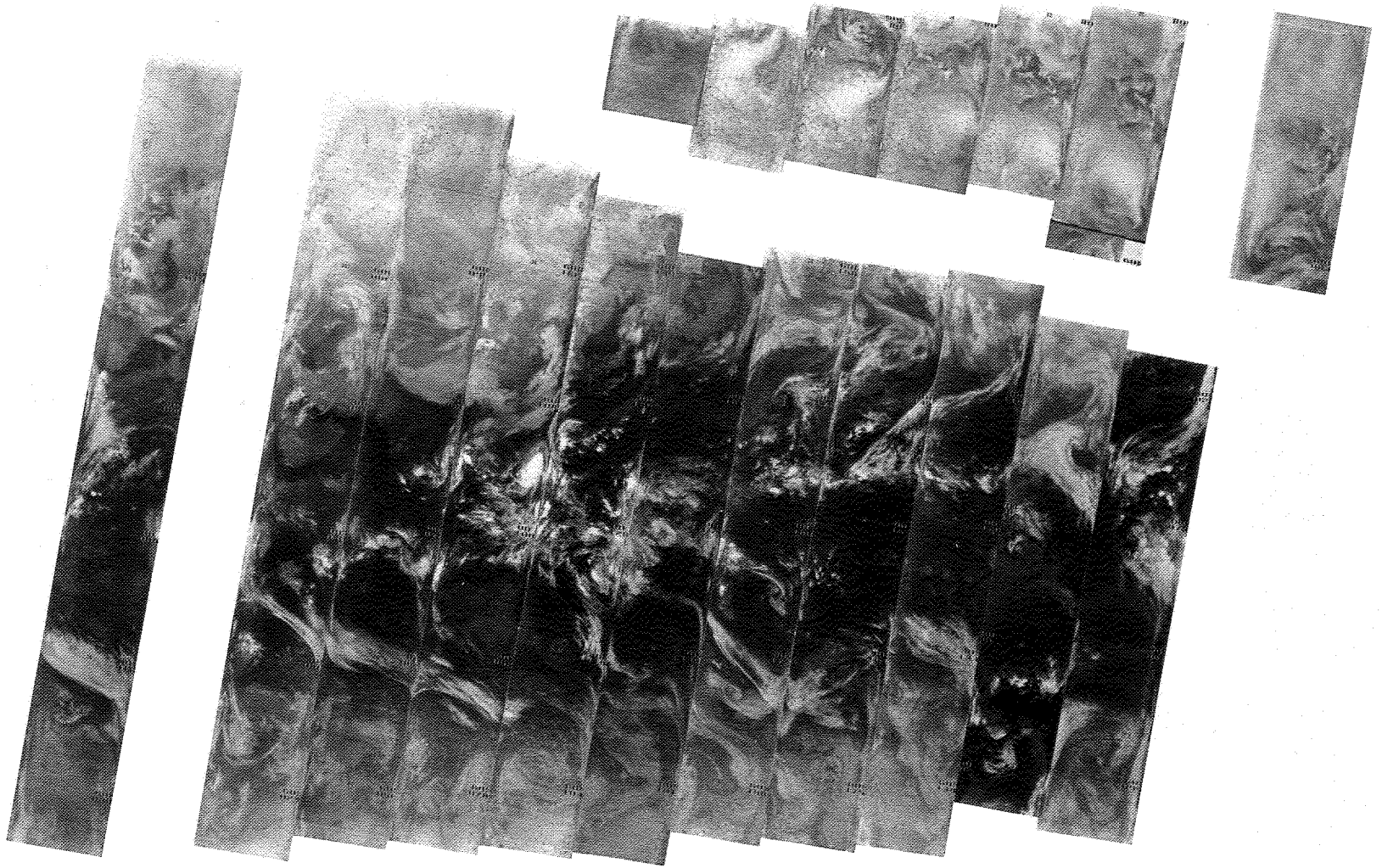
13 NOVEMBER 1973

11.5 μm



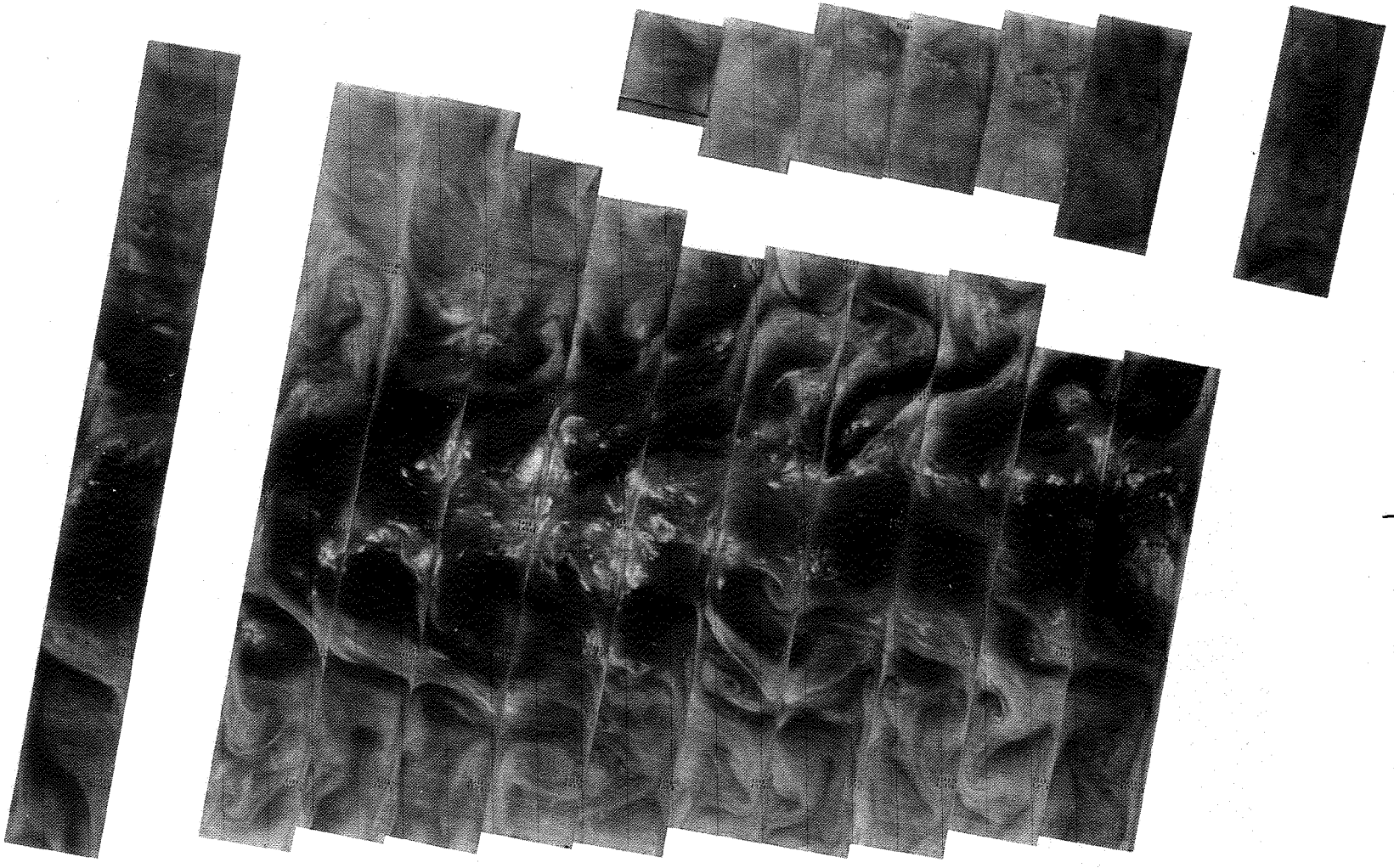
13 NOVEMBER 1973

6.7 μm



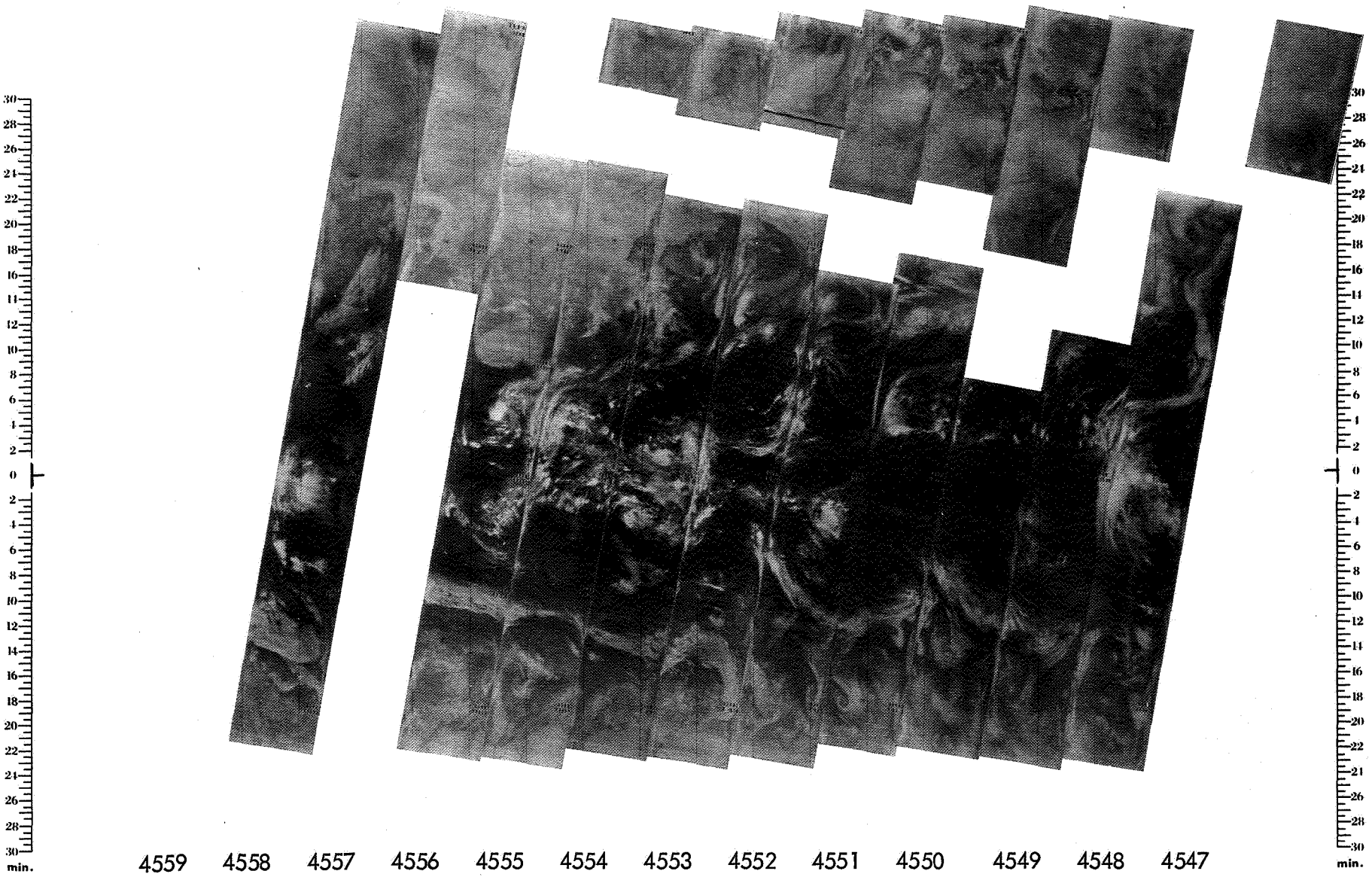
14 NOVEMBER 1973

11.5 μm



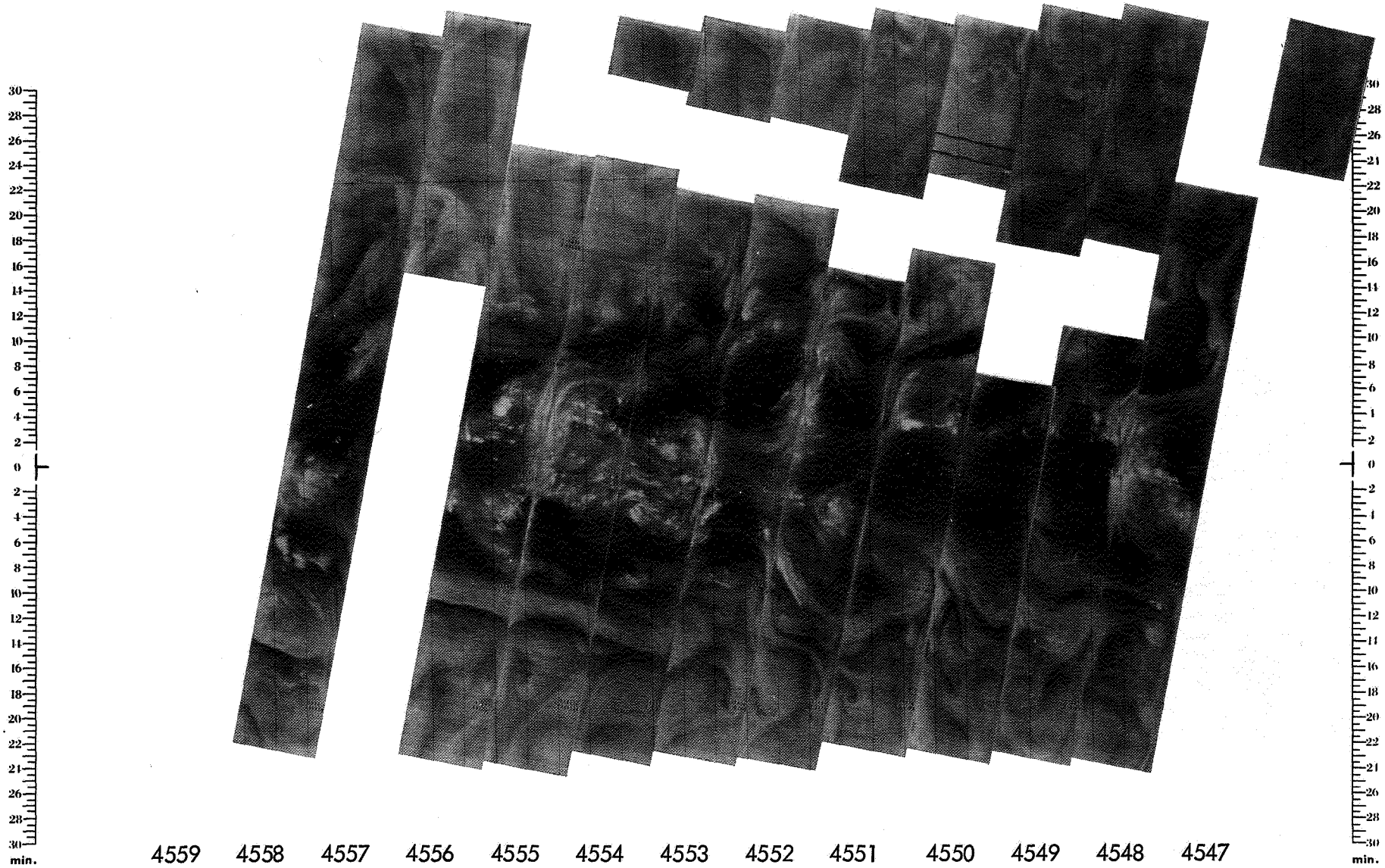
14 NOVEMBER 1973

6.7 μm



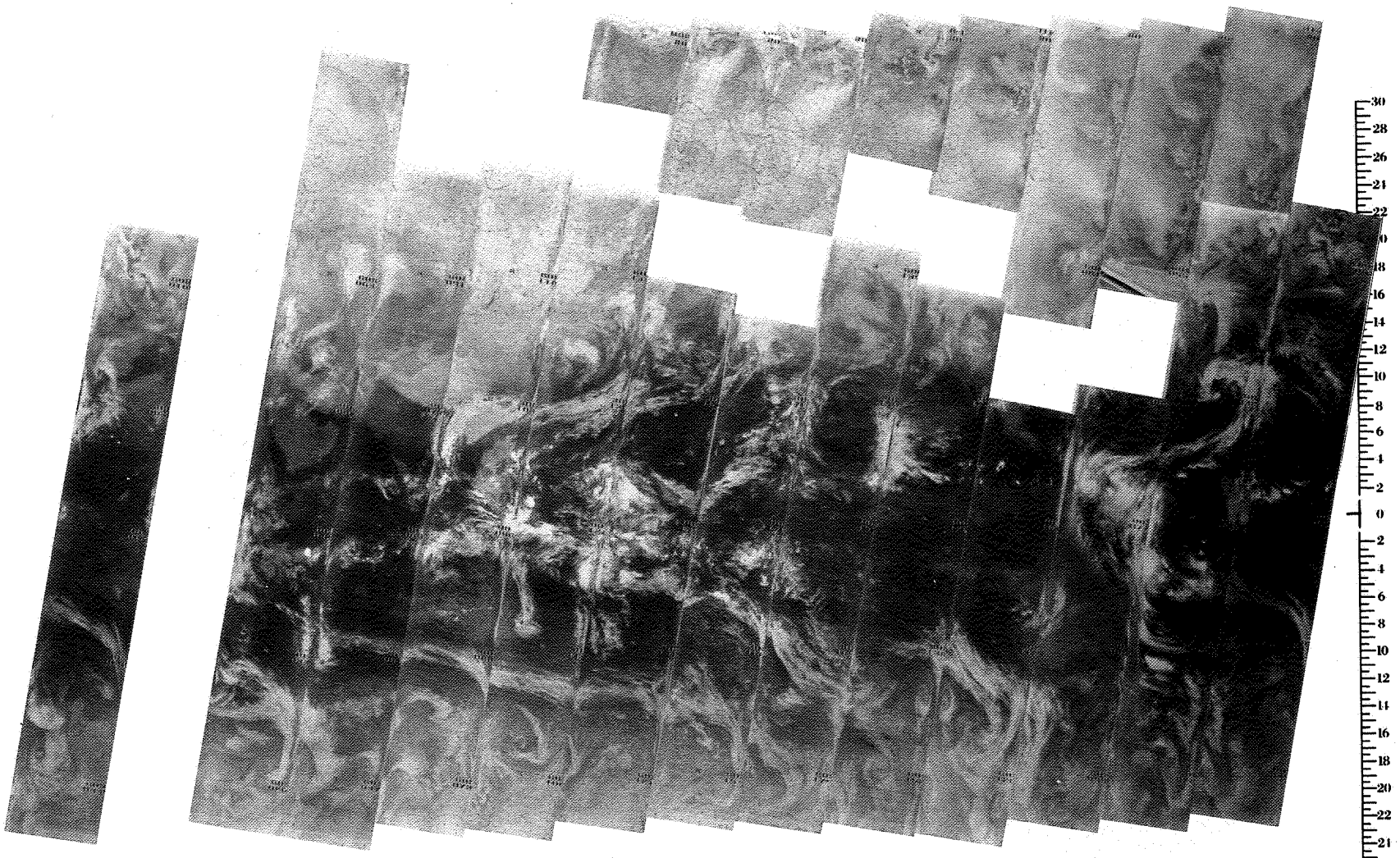
15 NOVEMBER 1973

11.5 μm



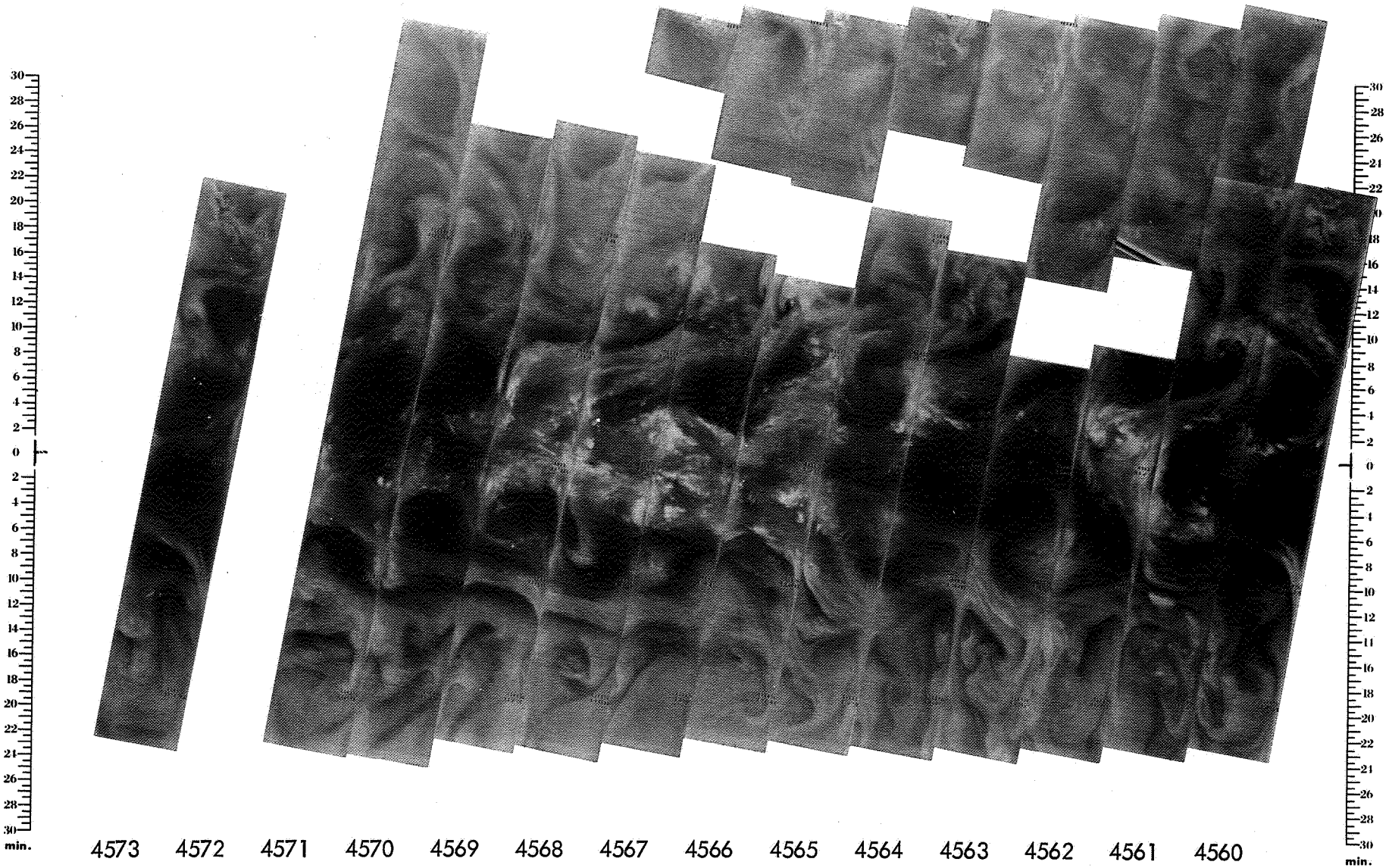
15 NOVEMBER 1973

6.7 μm



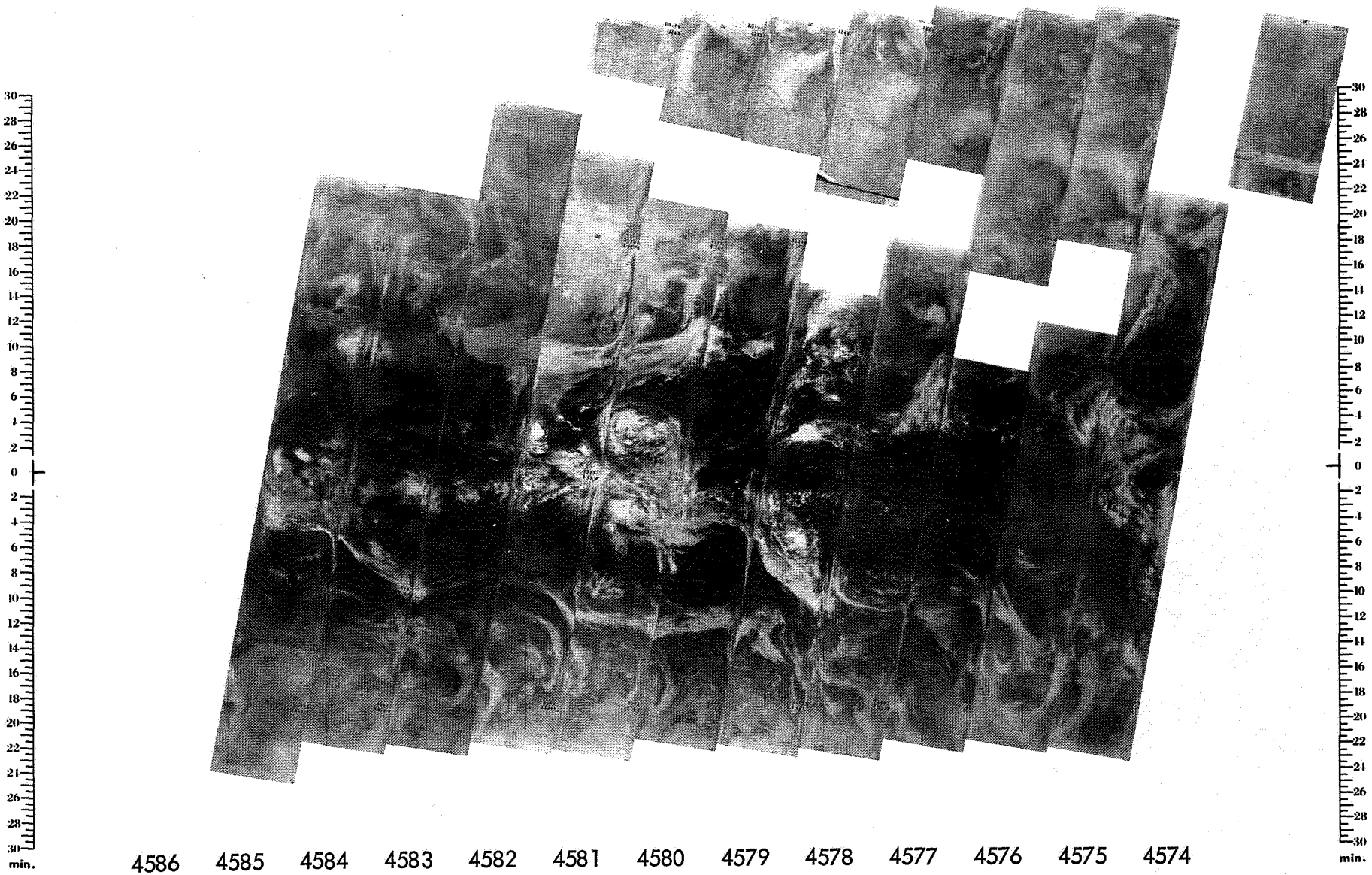
16 NOVEMBER 1973

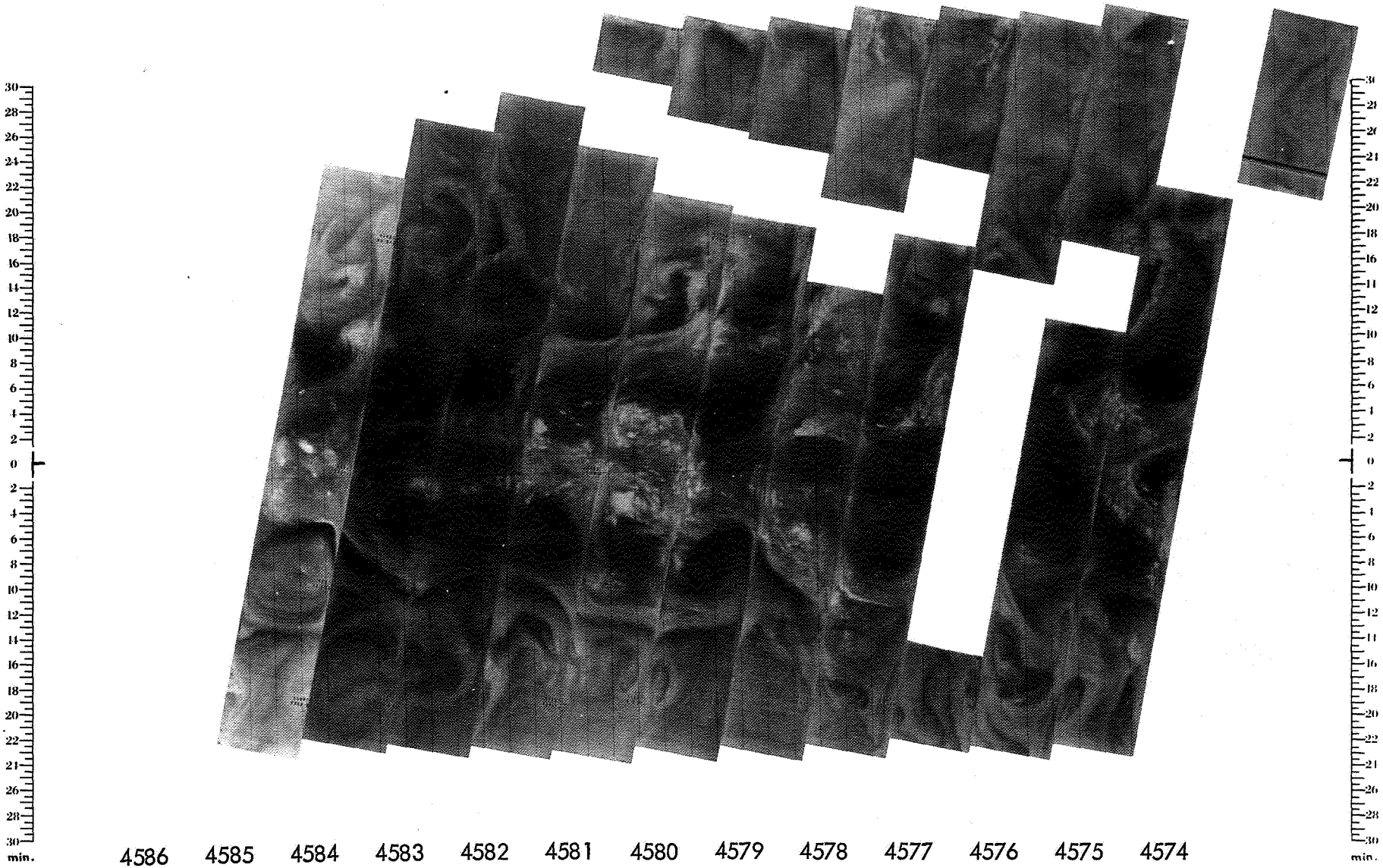
11.5 μm



16 NOVEMBER 1973

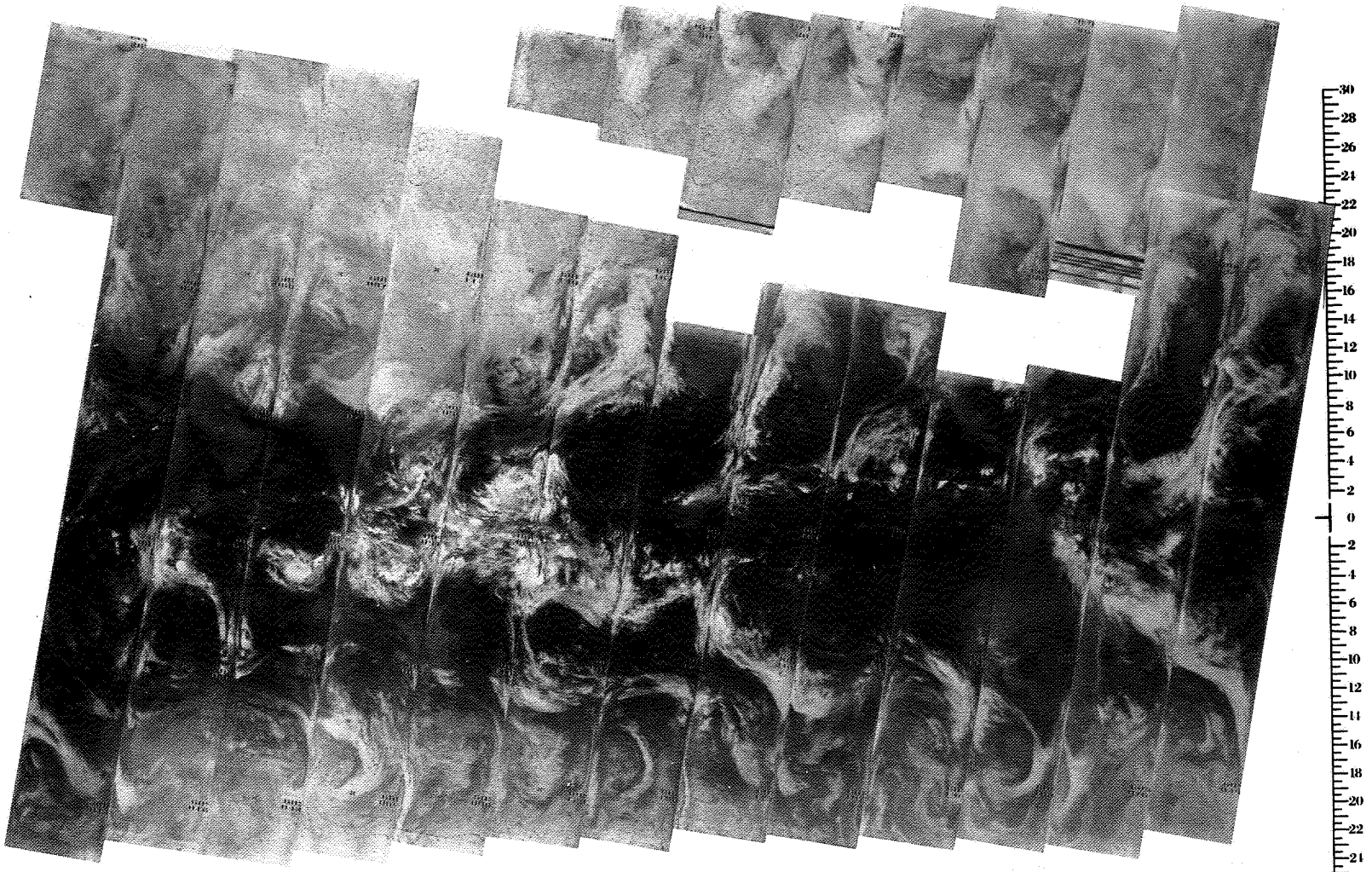
6.7 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4586 4585 4584 4583 4582 4581 4580 4579 4578 4577 4576 4575 4574
17 NOVEMBER 1973
11.5 μm



17 NOVEMBER 1973

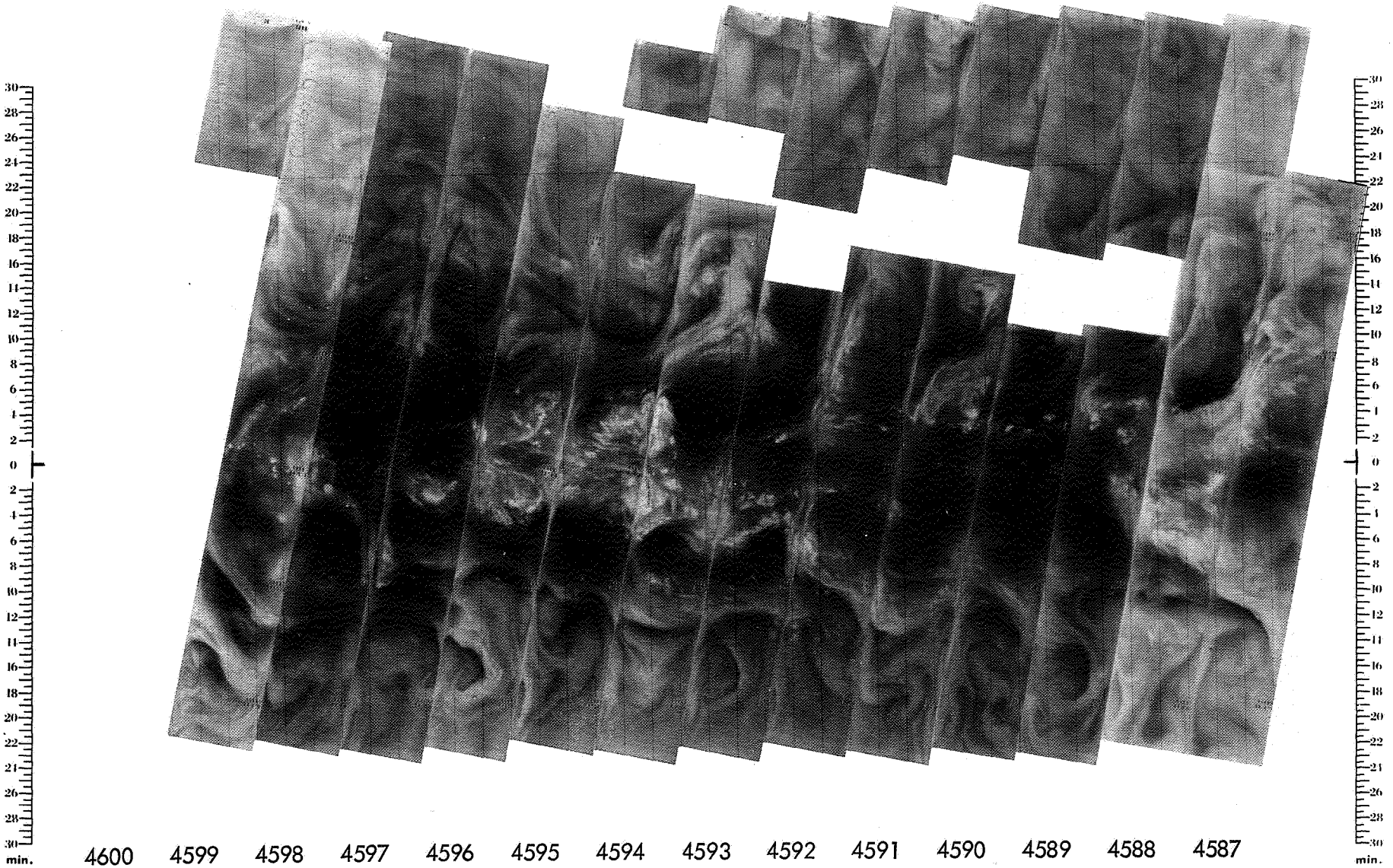
6.7 μm



4600 4599 4598 4597 4596 4595 4594 4593 4592 4591 4590 4589 4588 4587

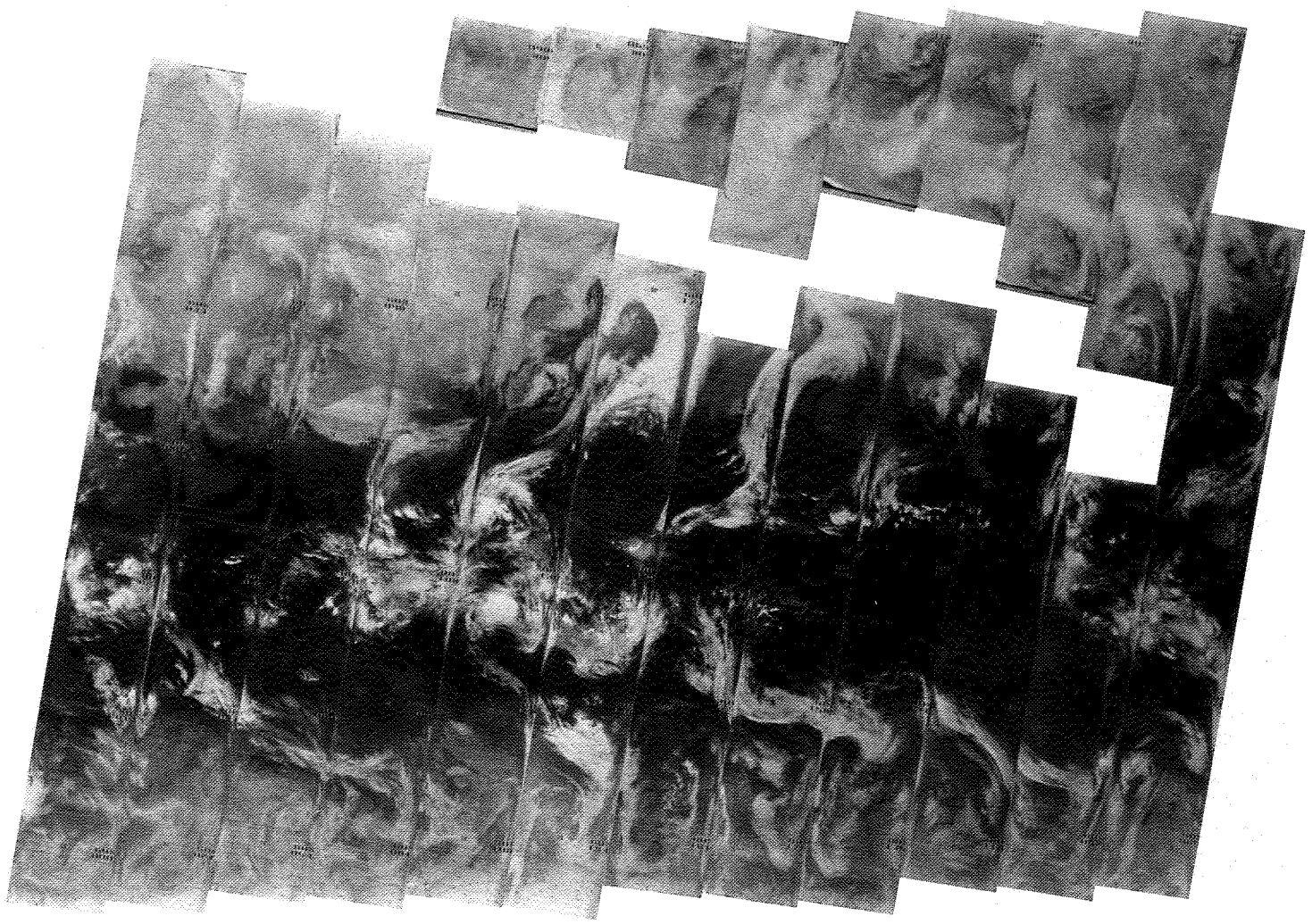
18 NOVEMBER 1973

11.5 μm



18 NOVEMBER 1973

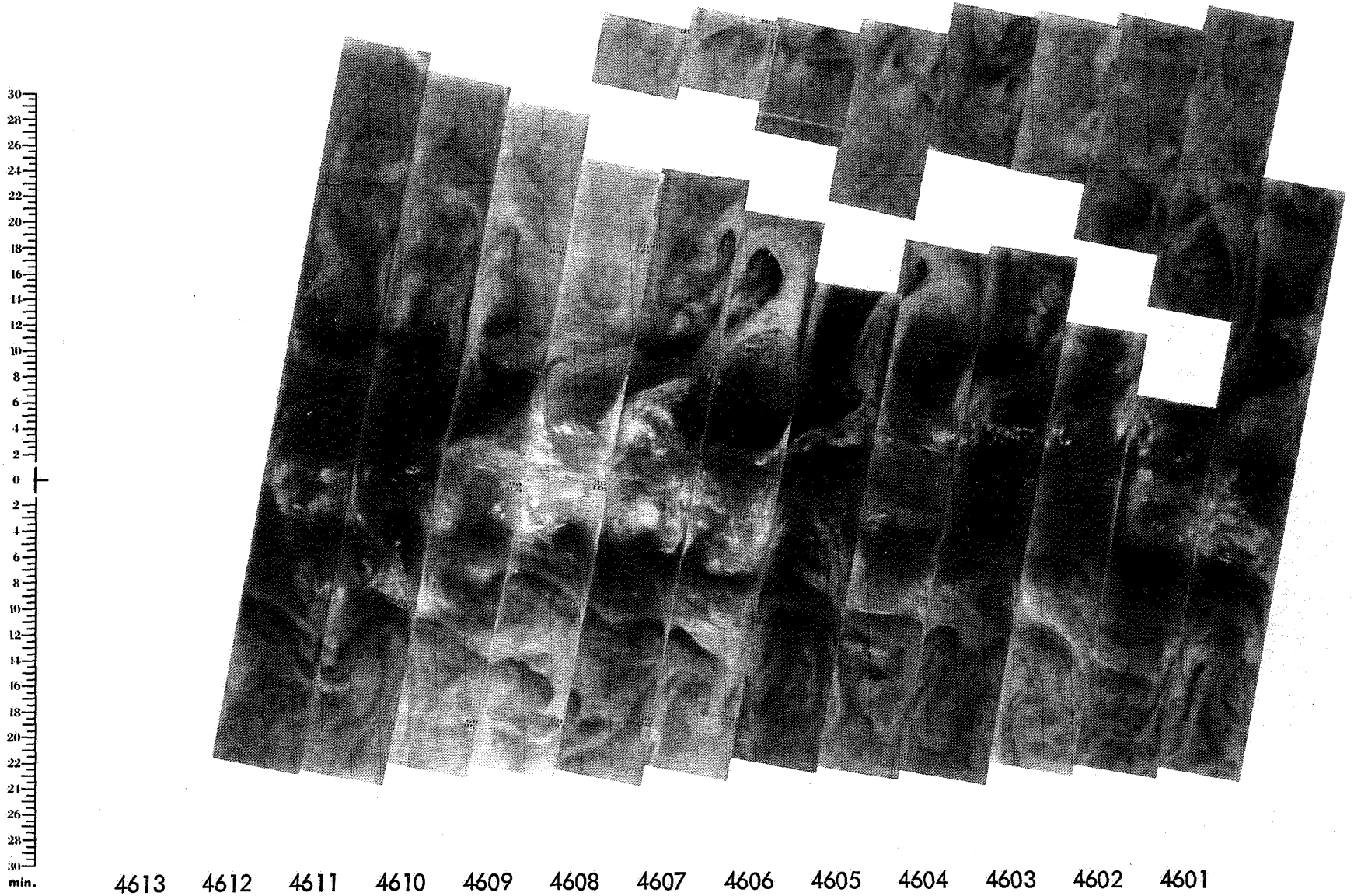
6.7 μm

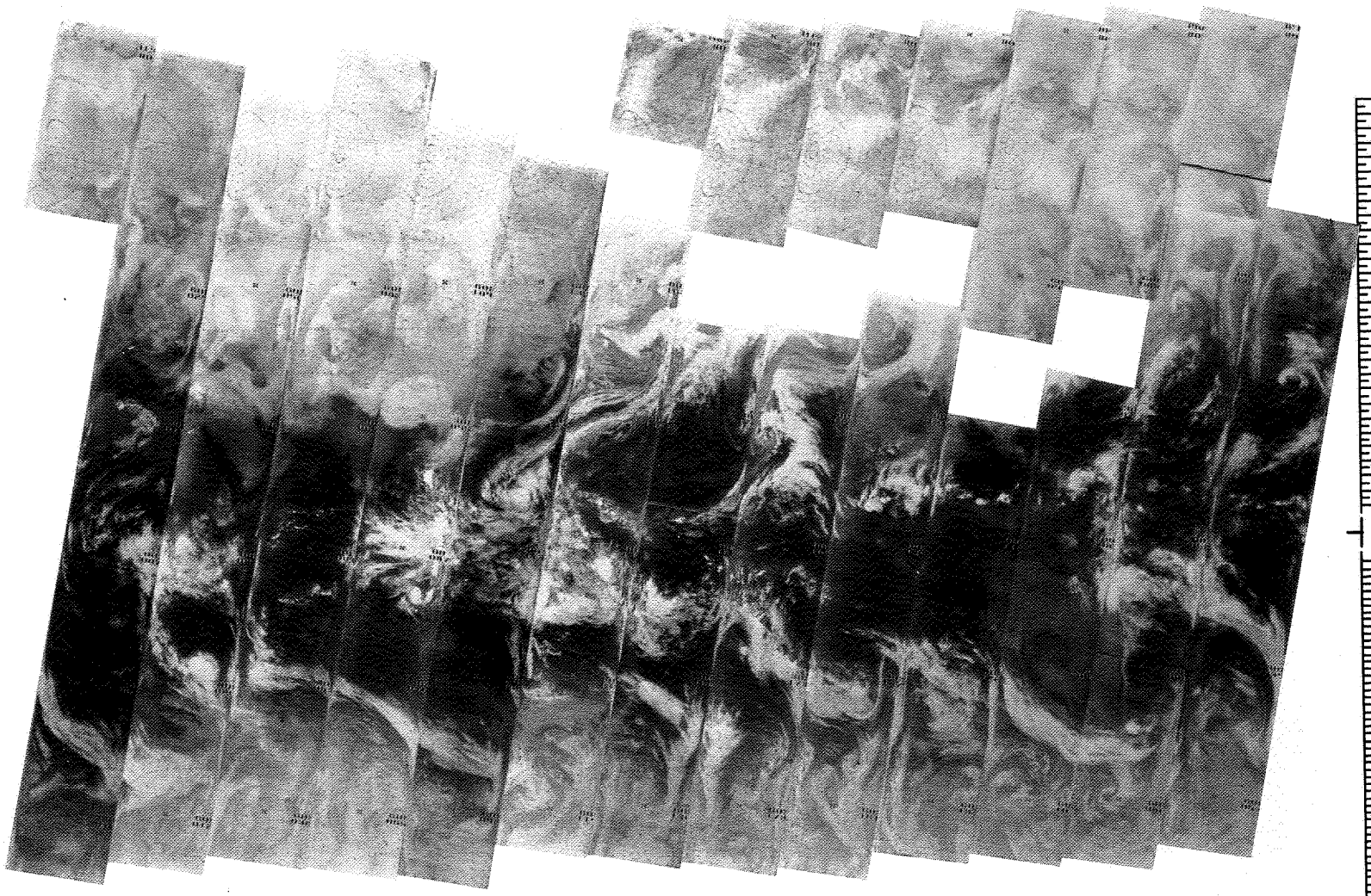


4613 4612 4611 4610 4609 4608 4607 4606 4605 4604 4603 4602 4601

19 NOVEMBER 1973

11.5 μm

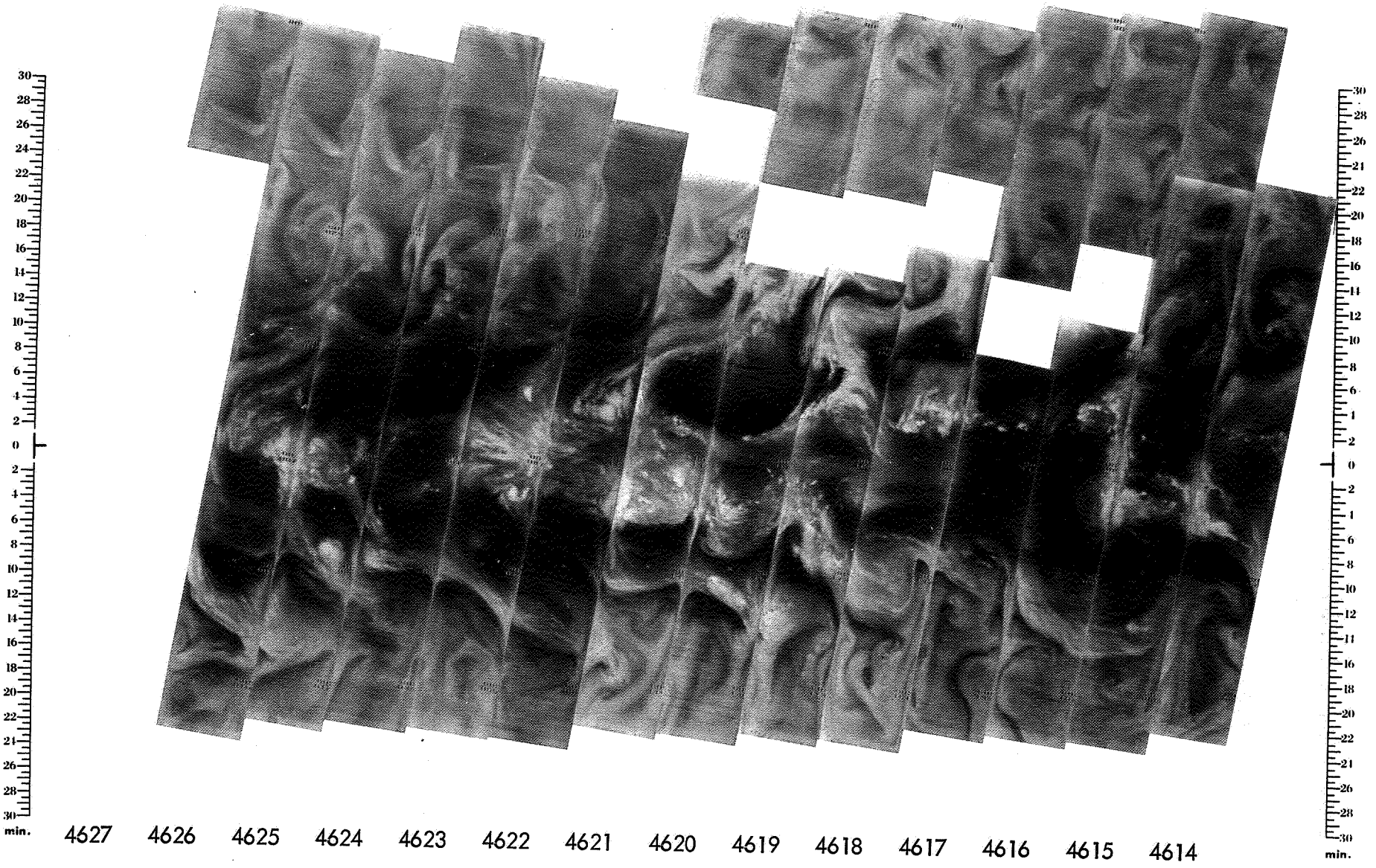

4613 4612 4611 4610 4609 4608 4607 4606 4605 4604 4603 4602 4601
19 NOVEMBER 1973
6.7 μm
min.
min.



4627 4626 4625 4624 4623 4622 4621 4620 4619 4618 4617 4616 4615 4614

20 NOVEMBER 1973

11.5 μm



20 NOVEMBER 1973

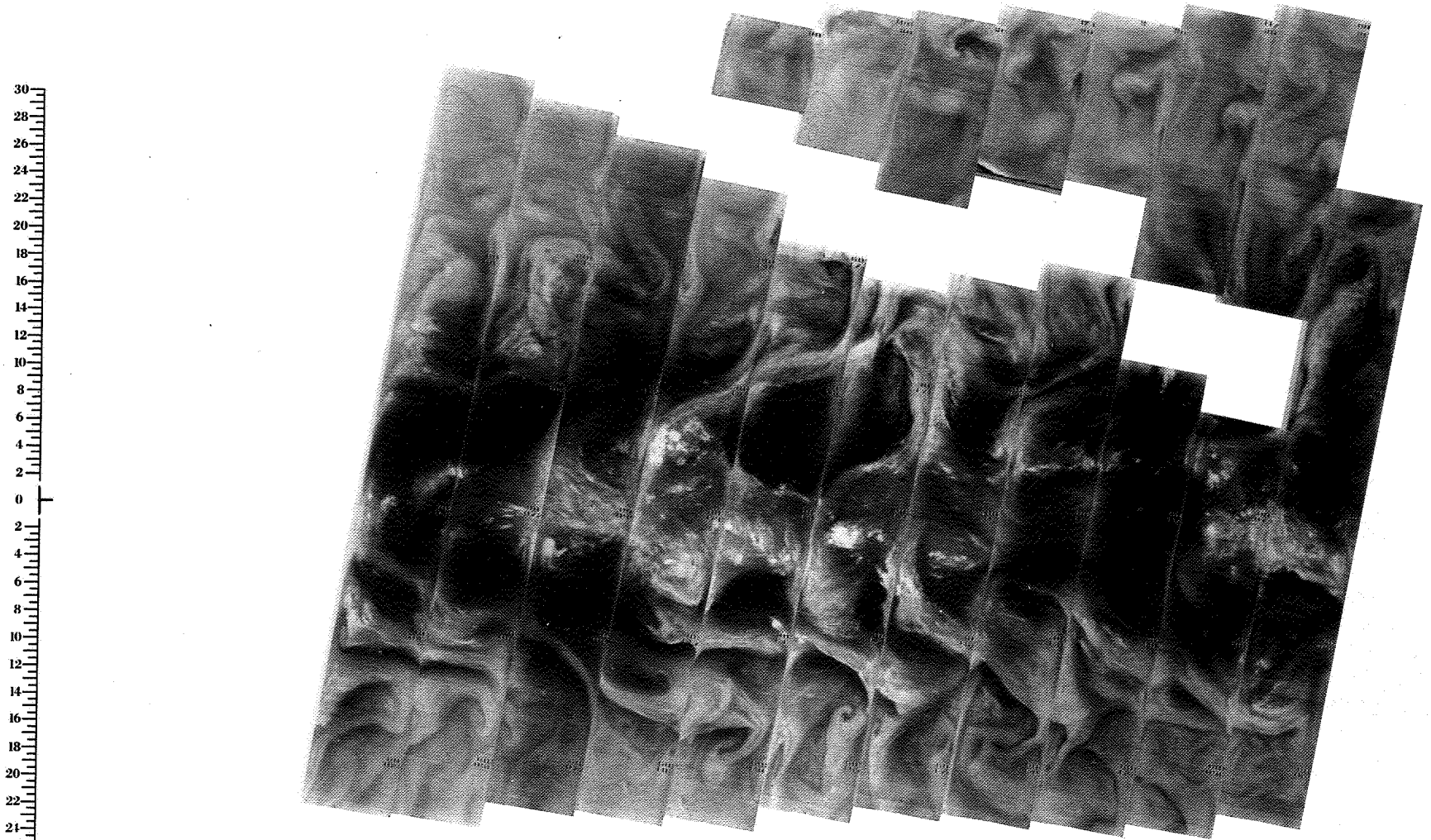
6.7 μm



4640 4639 4638 4637 4636 4635 4634 4633 4632 4631 4630 4629 4628

21 NOVEMBER 1973

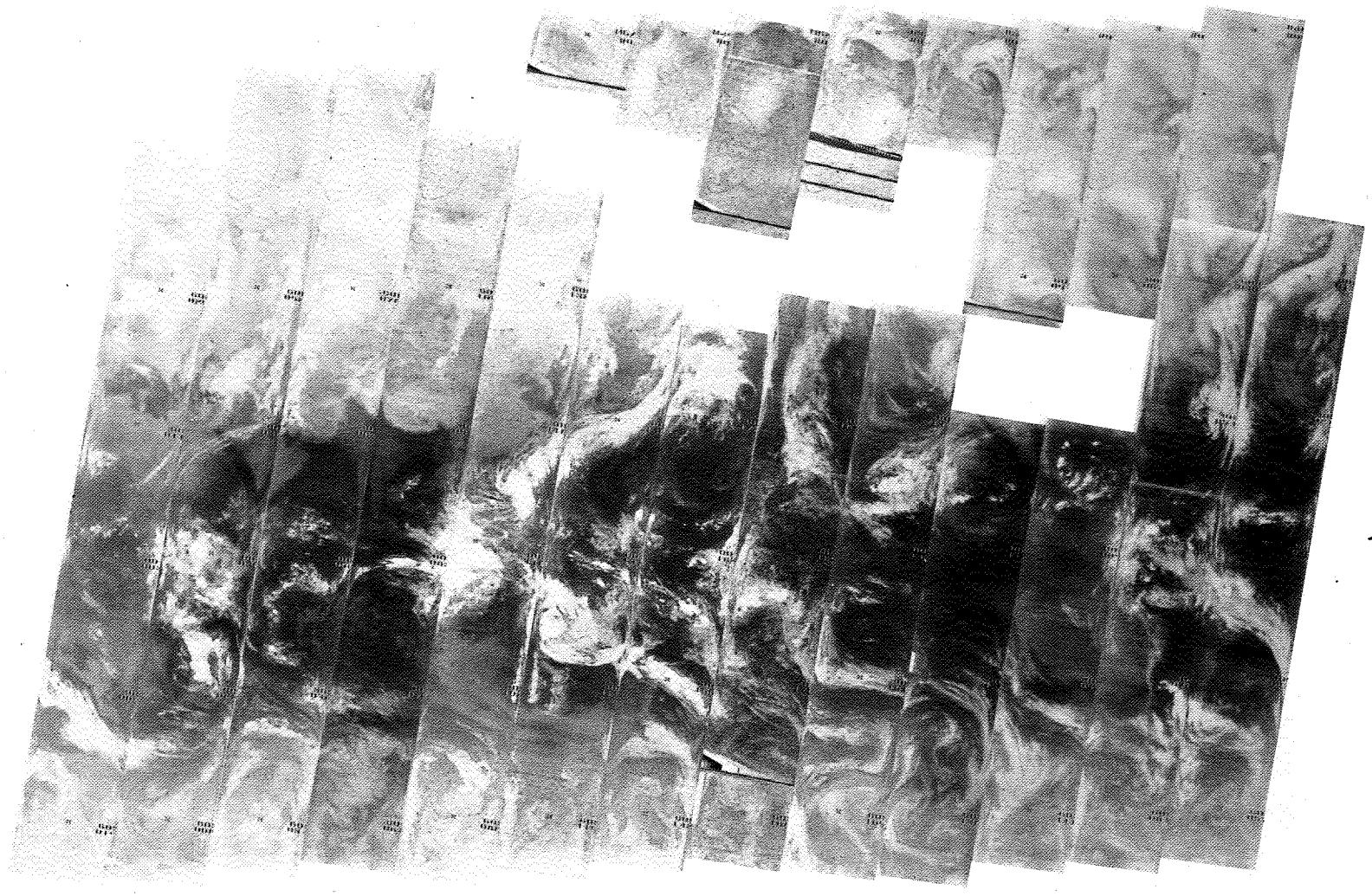
11.5 μm



4640 4639 4638 4637 4636 4635 4634 4633 4632 4631 4630 4629 4628

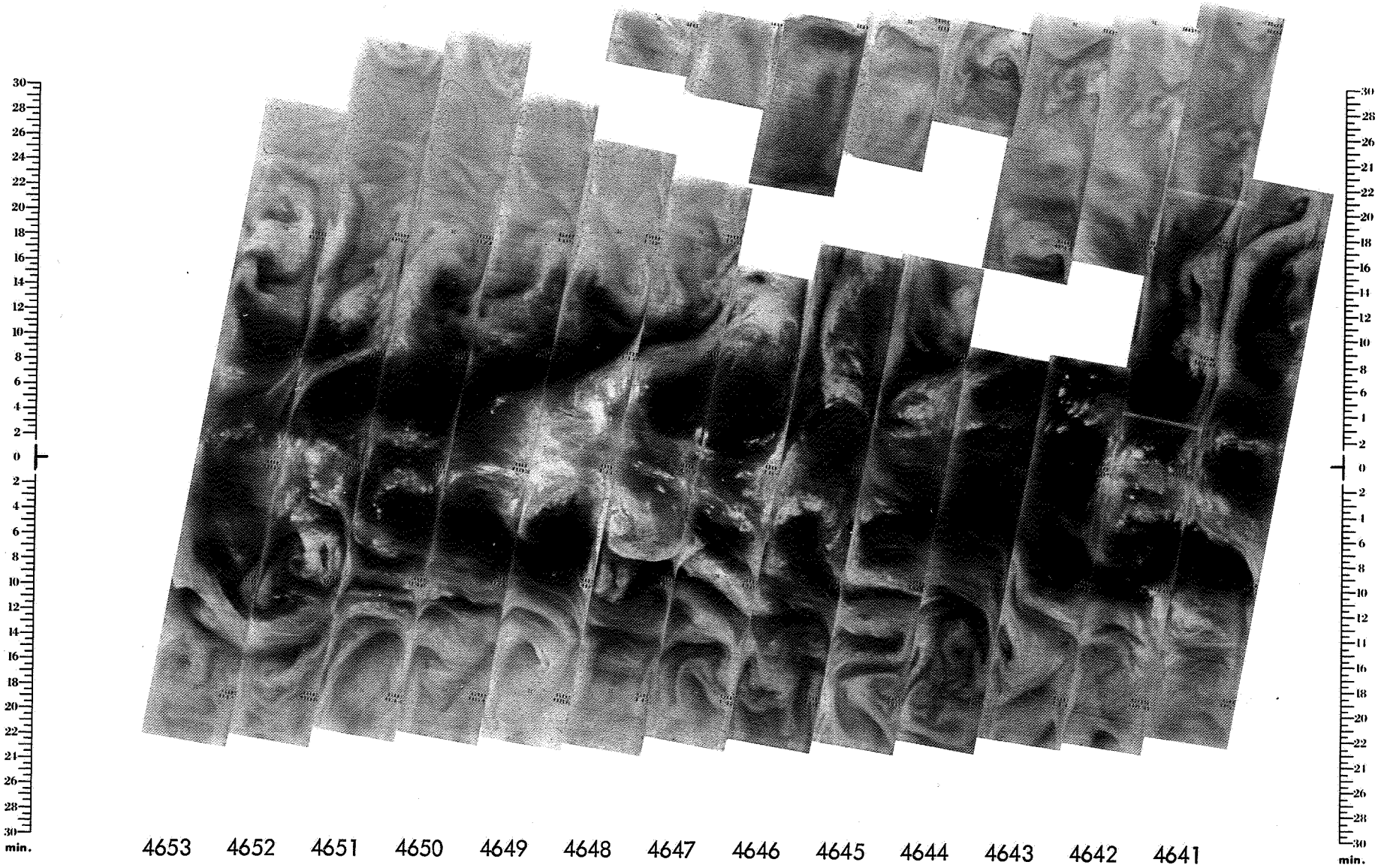
21 NOVEMBER 1973

6.7 μm



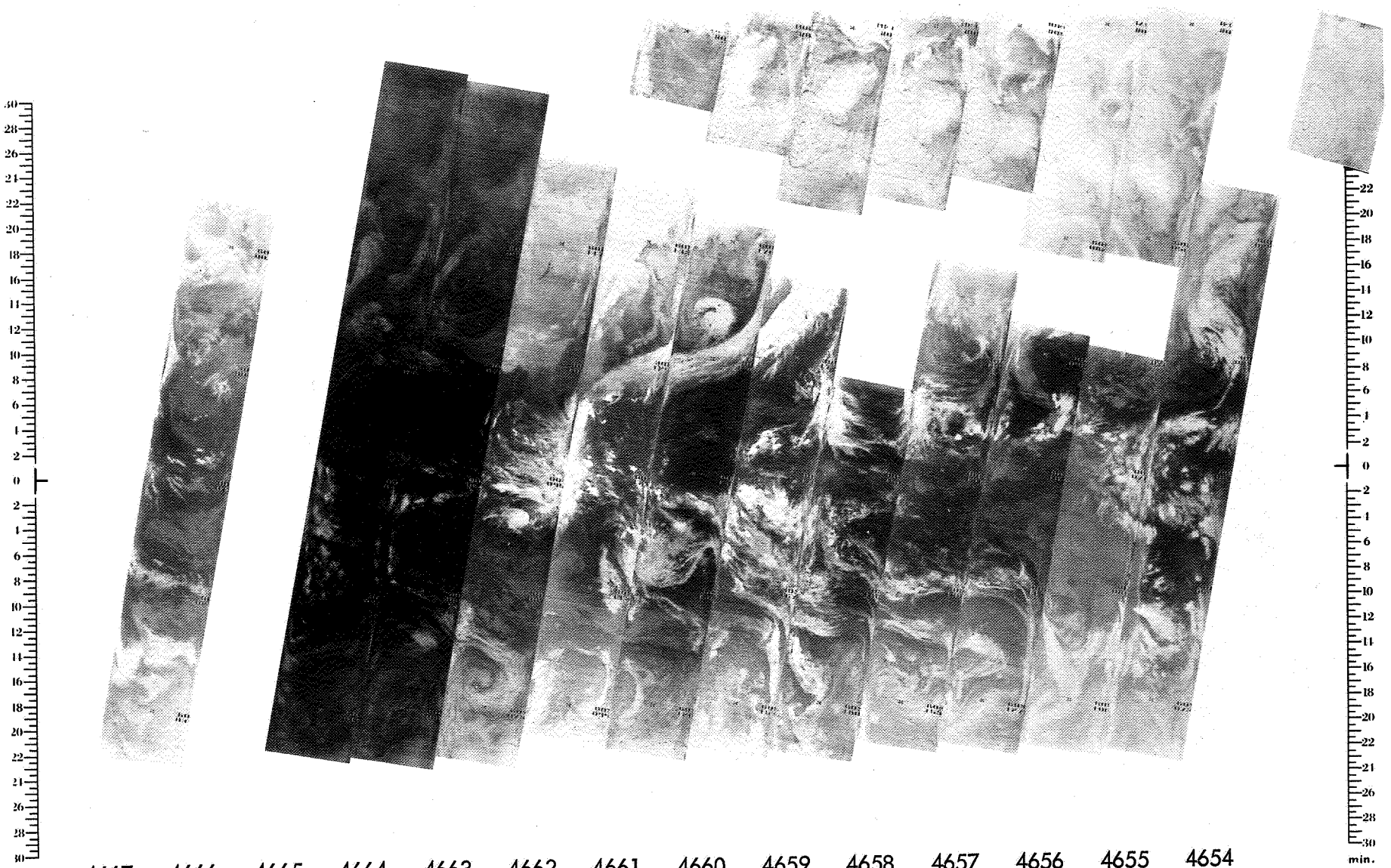
22 NOVEMBER 1973

11.5 μm



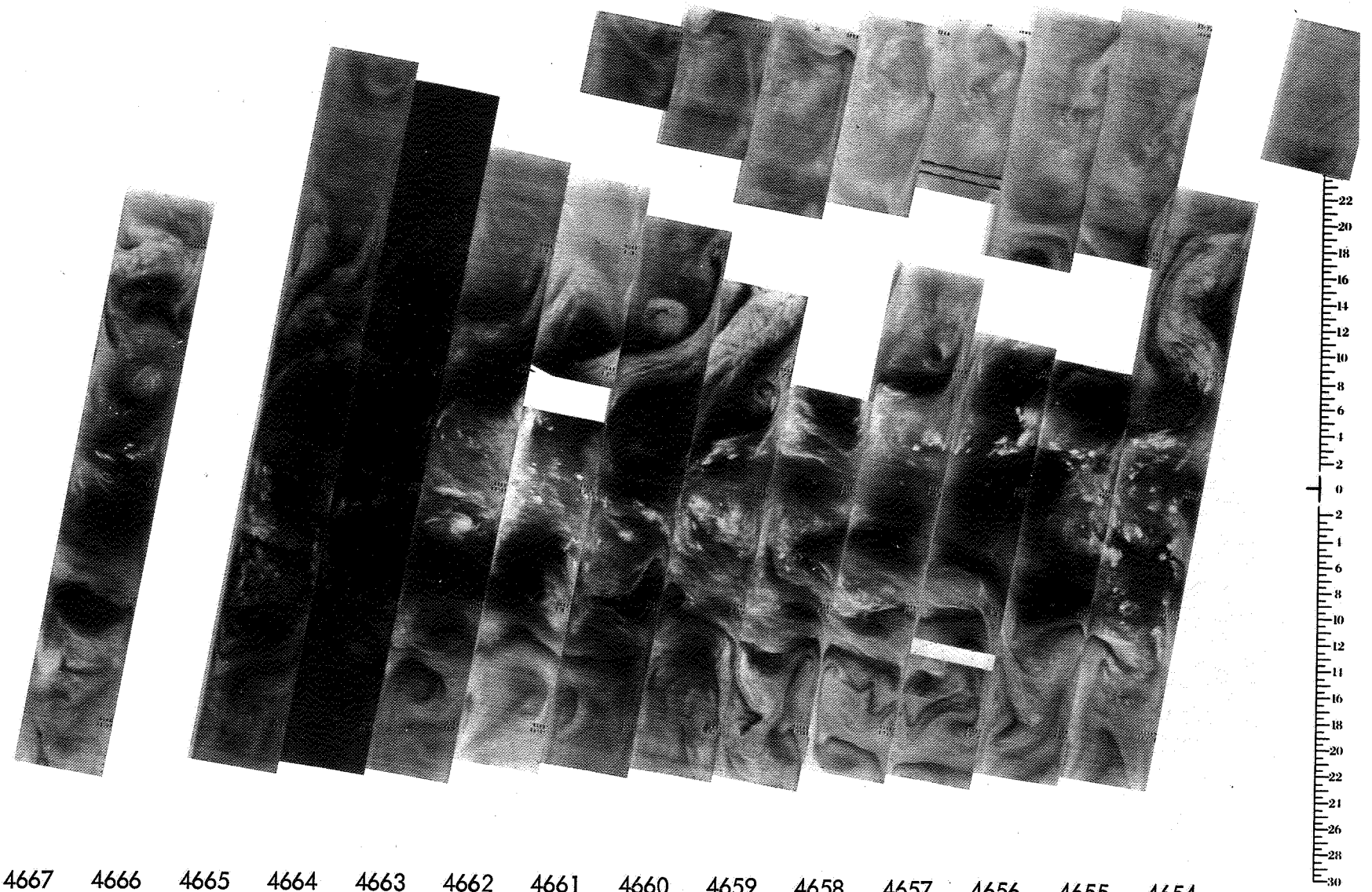
22 NOVEMBER 1973

6.7 μm



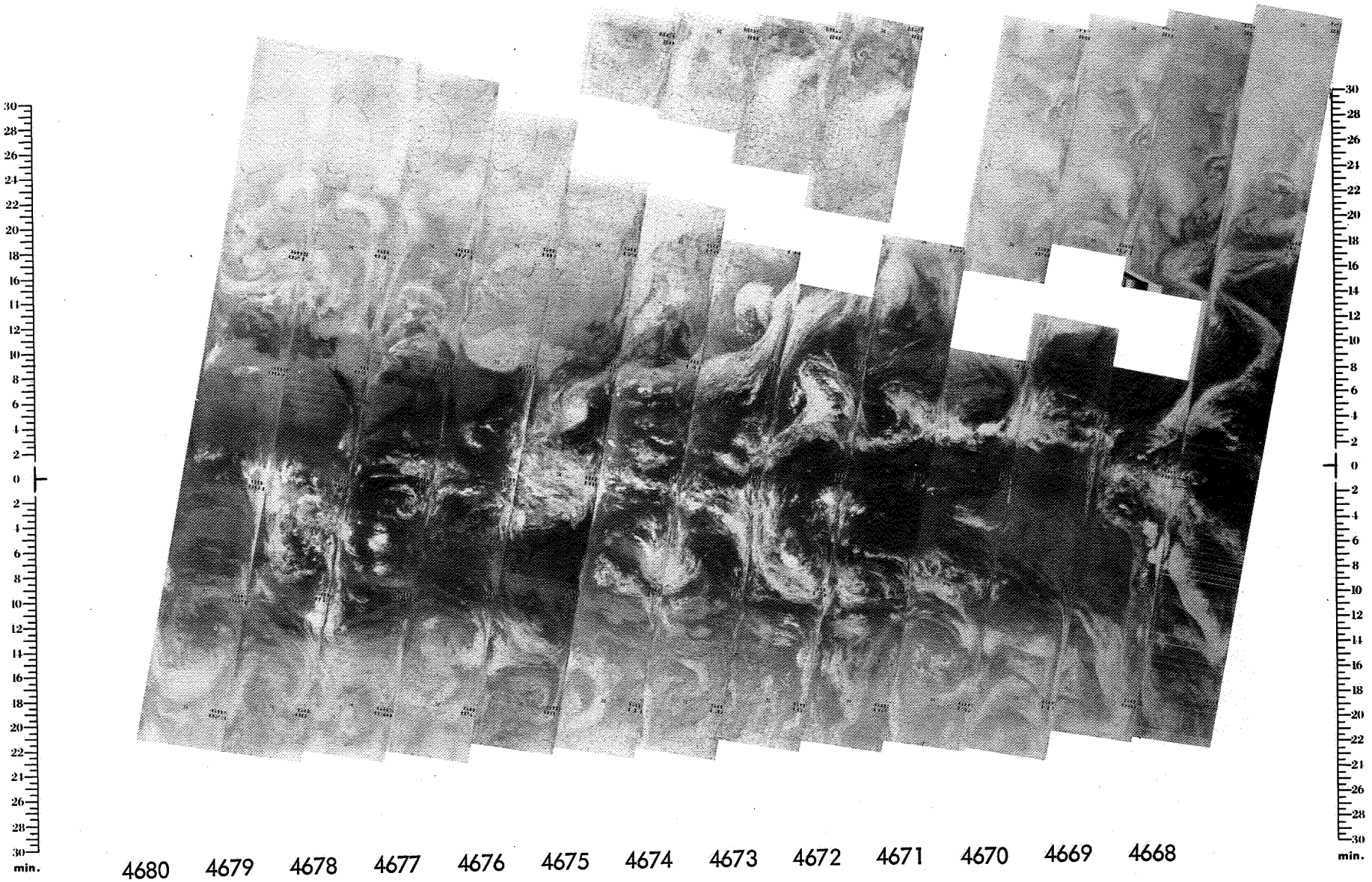
23 NOVEMBER 1973

11.5 μm



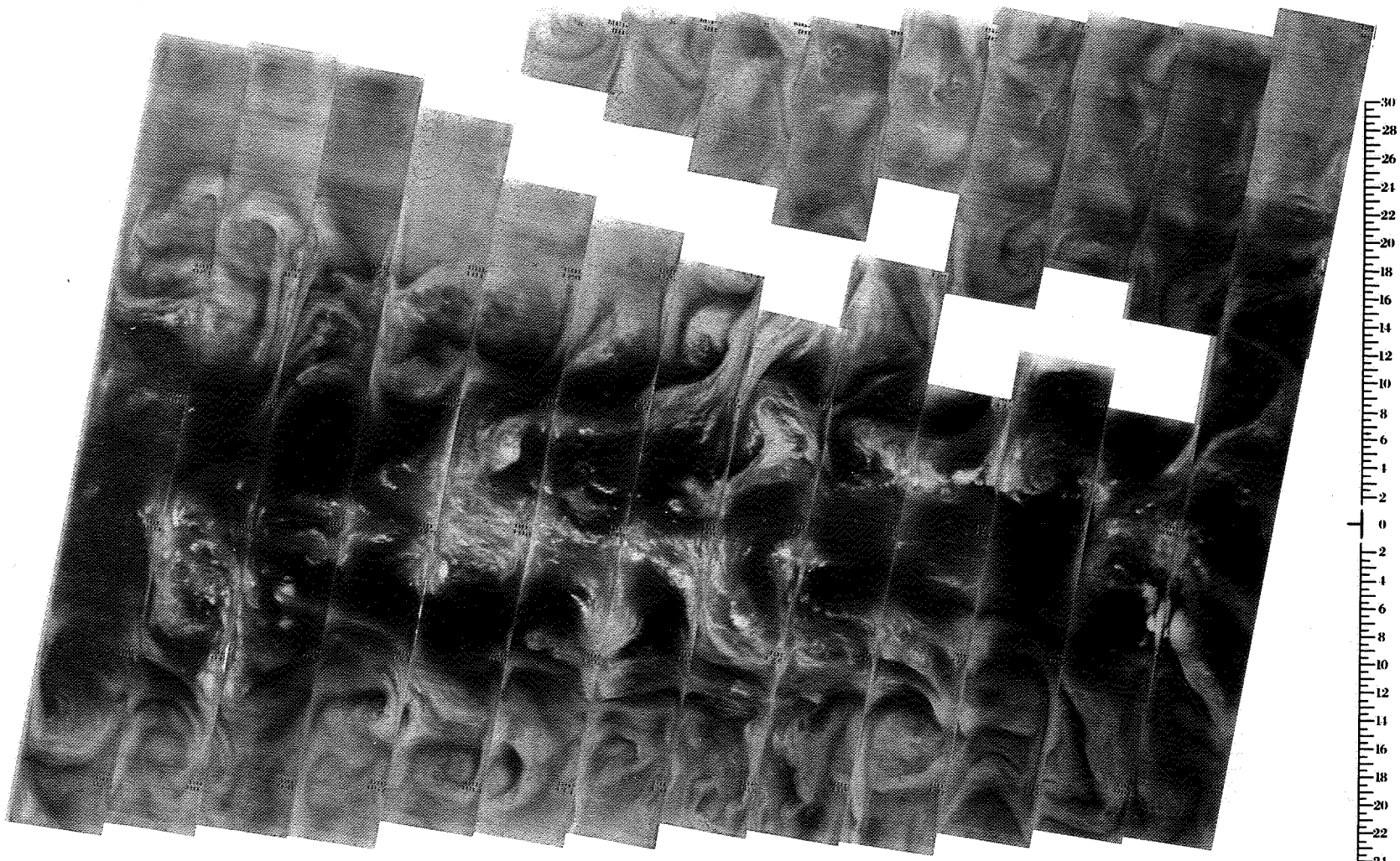
23 NOVEMBER 1973

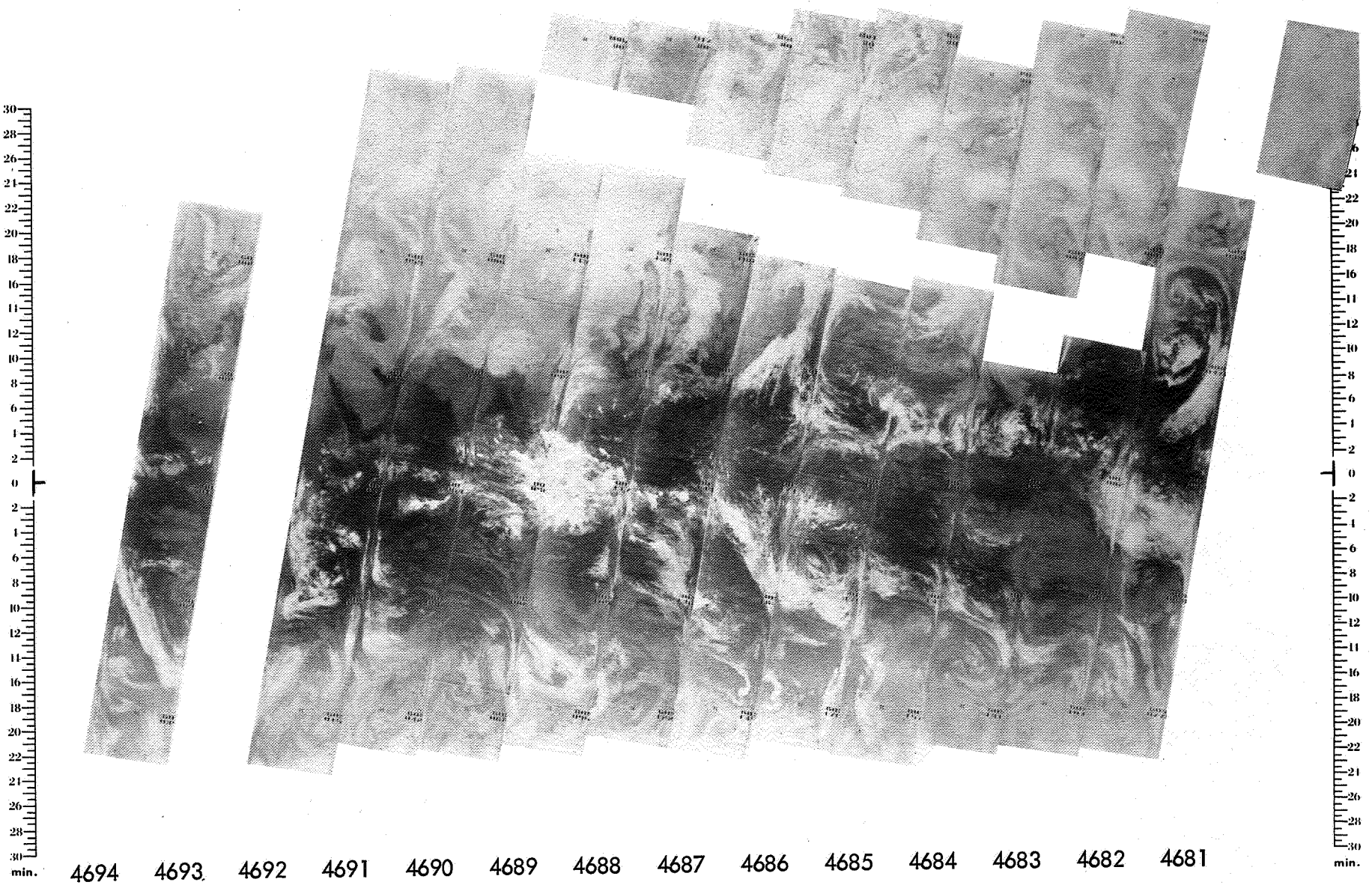
6.7 μm

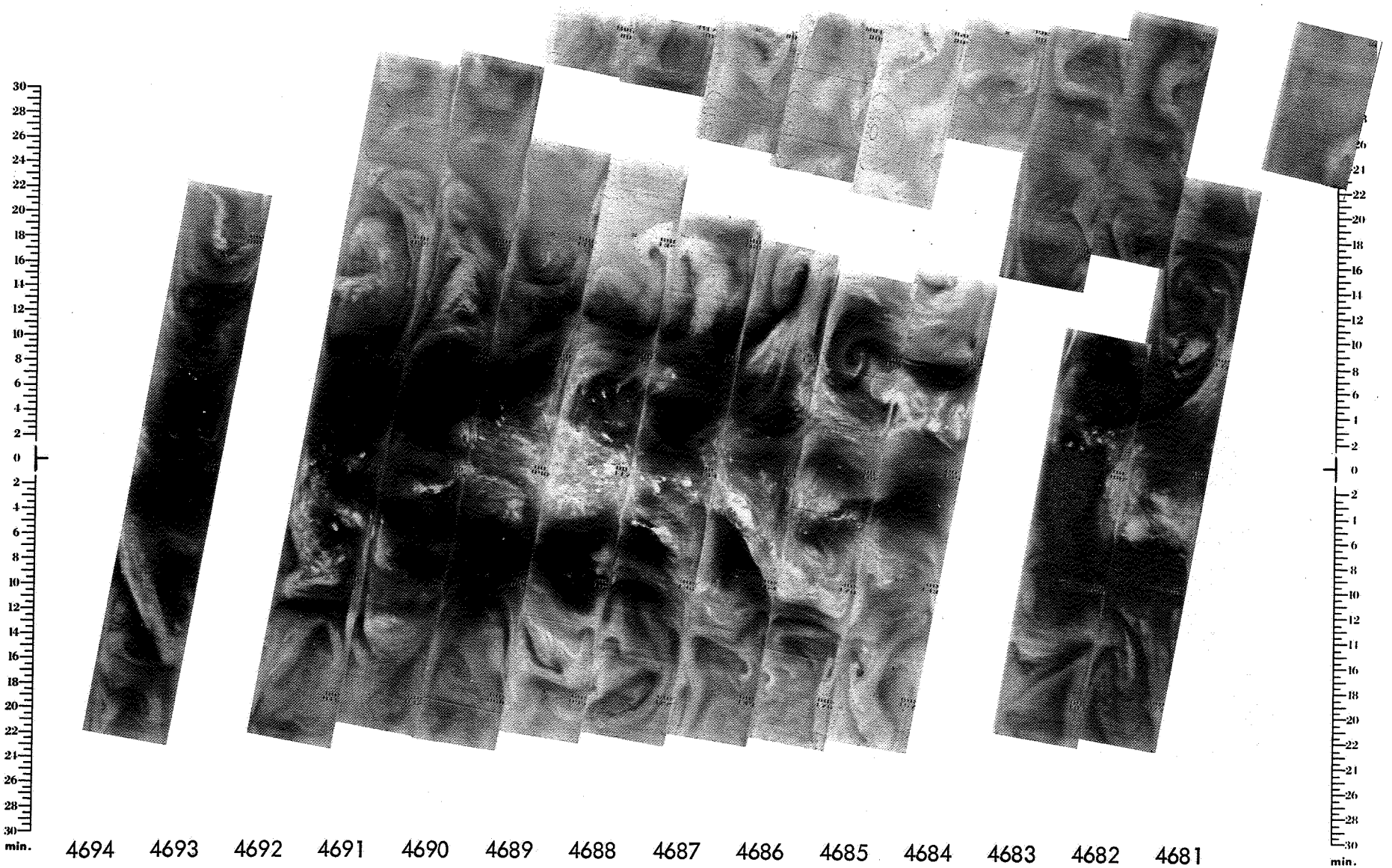


24 NOVEMBER 1973

11.5 μm

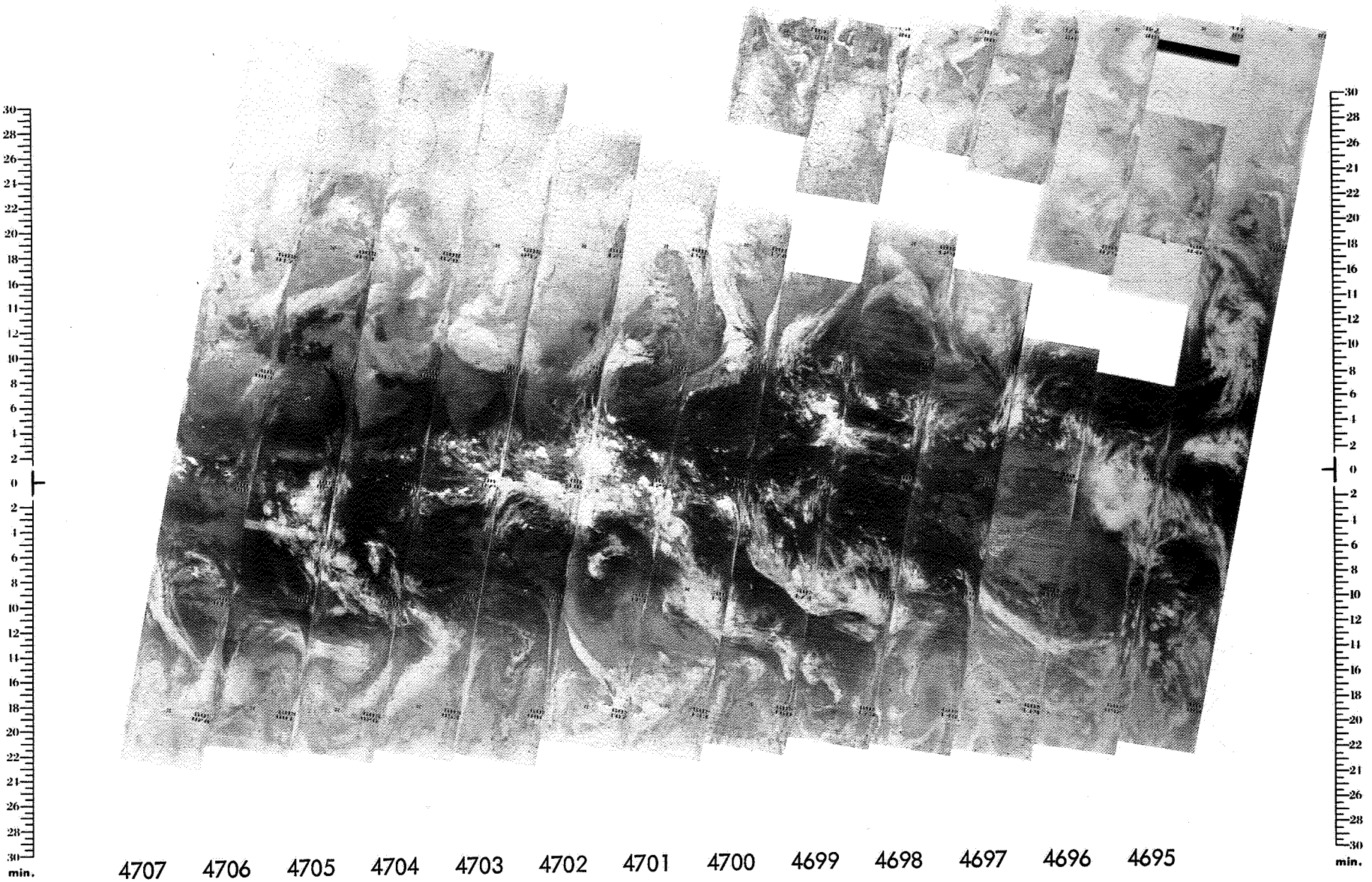

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4680 4679 4678 4677 4676 4675 4674 4673 4672 4671 4670 4669 4668
24 NOVEMBER 1973
6.7 μm


4694
4693
4692
4691
4690
4689
4688
4687
4686
4685
4684
4683
4682
4681
min.
min.
25 NOVEMBER 1973
11.5 μm



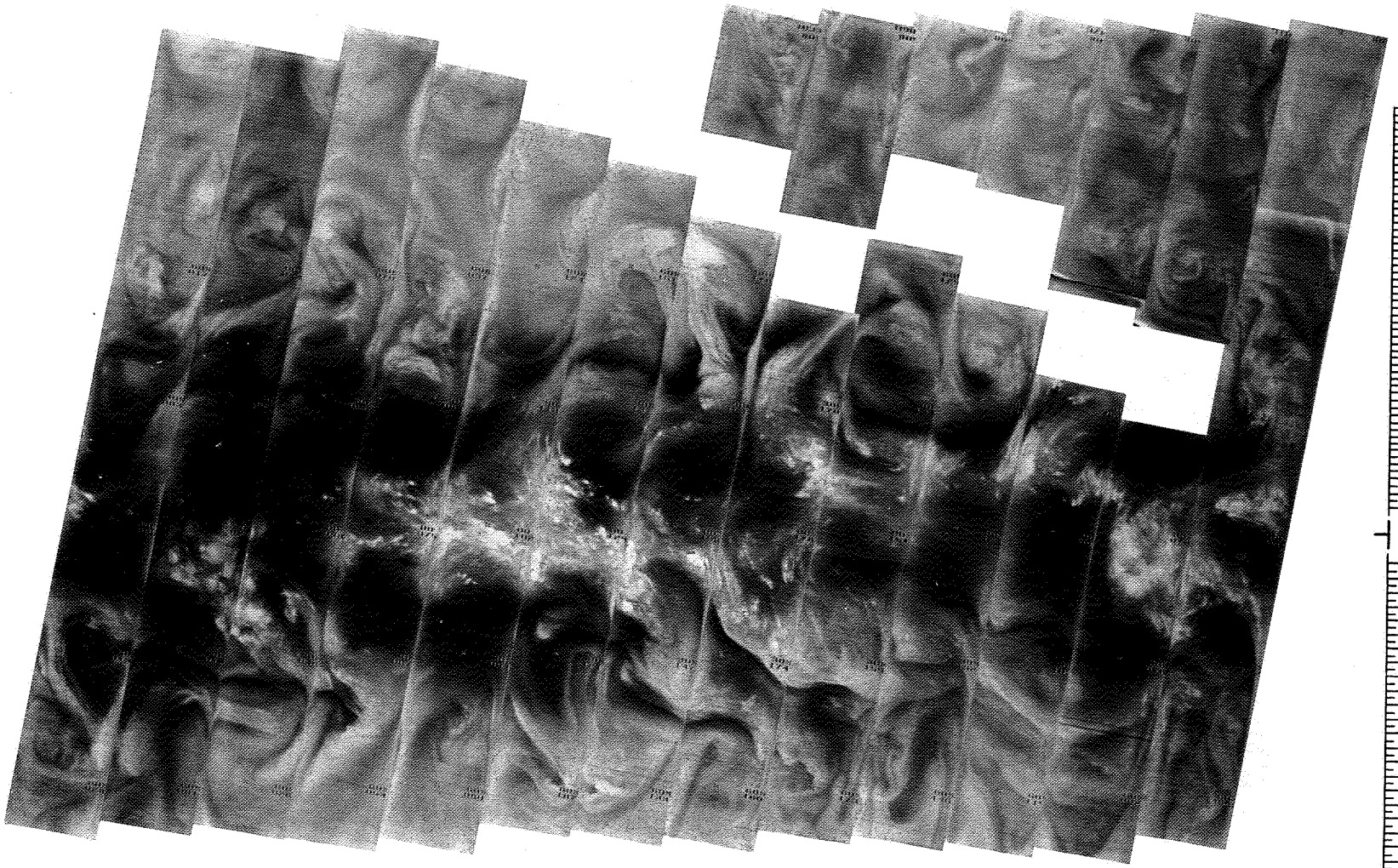
25 NOVEMBER 1973

6.7 μm



26 NOVEMBER 1973

11.5 μm

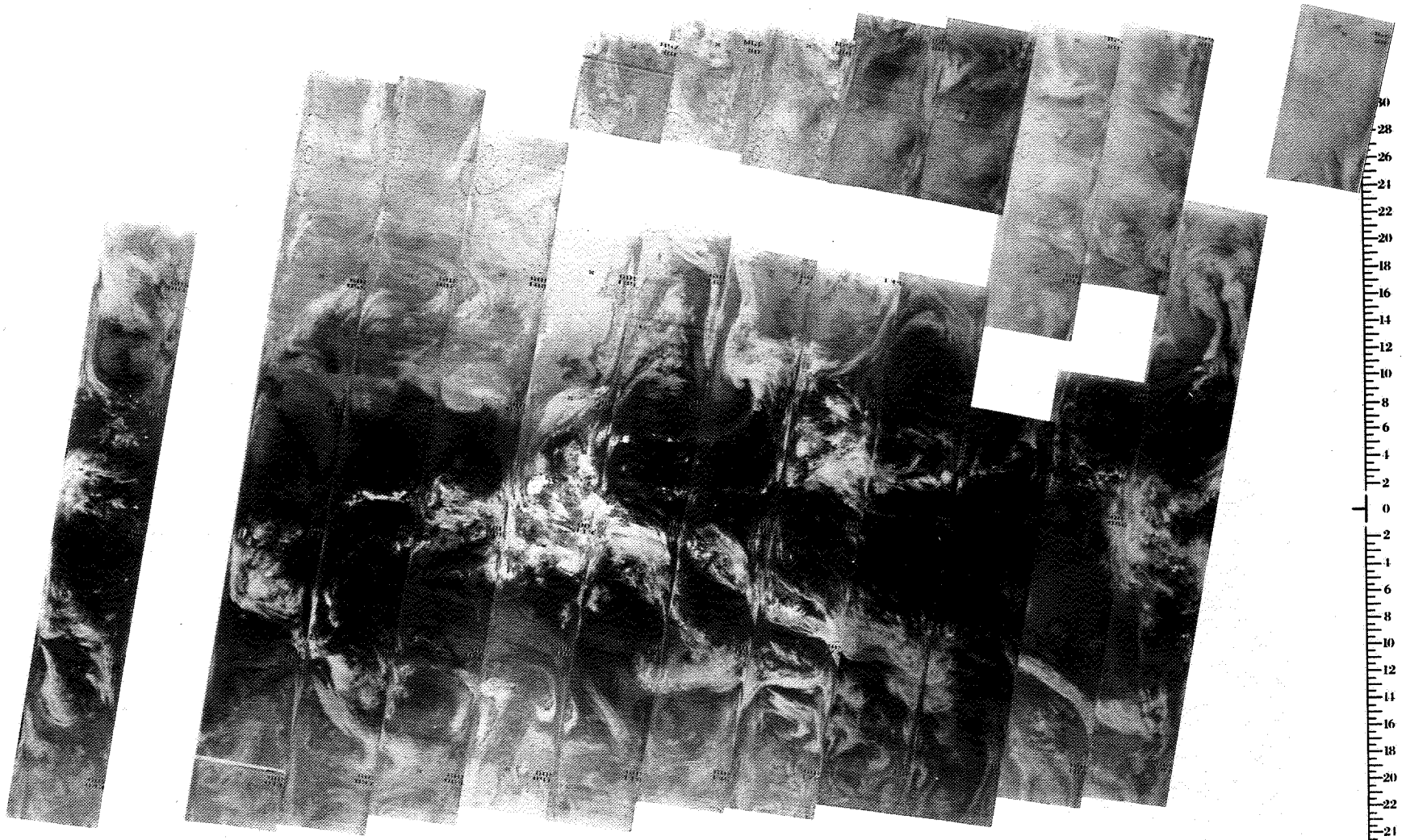


4707 4706 4705 4704 4703 4702 4701 4700 4699 4698 4697 4696 4695

26 NOVEMBER 1973

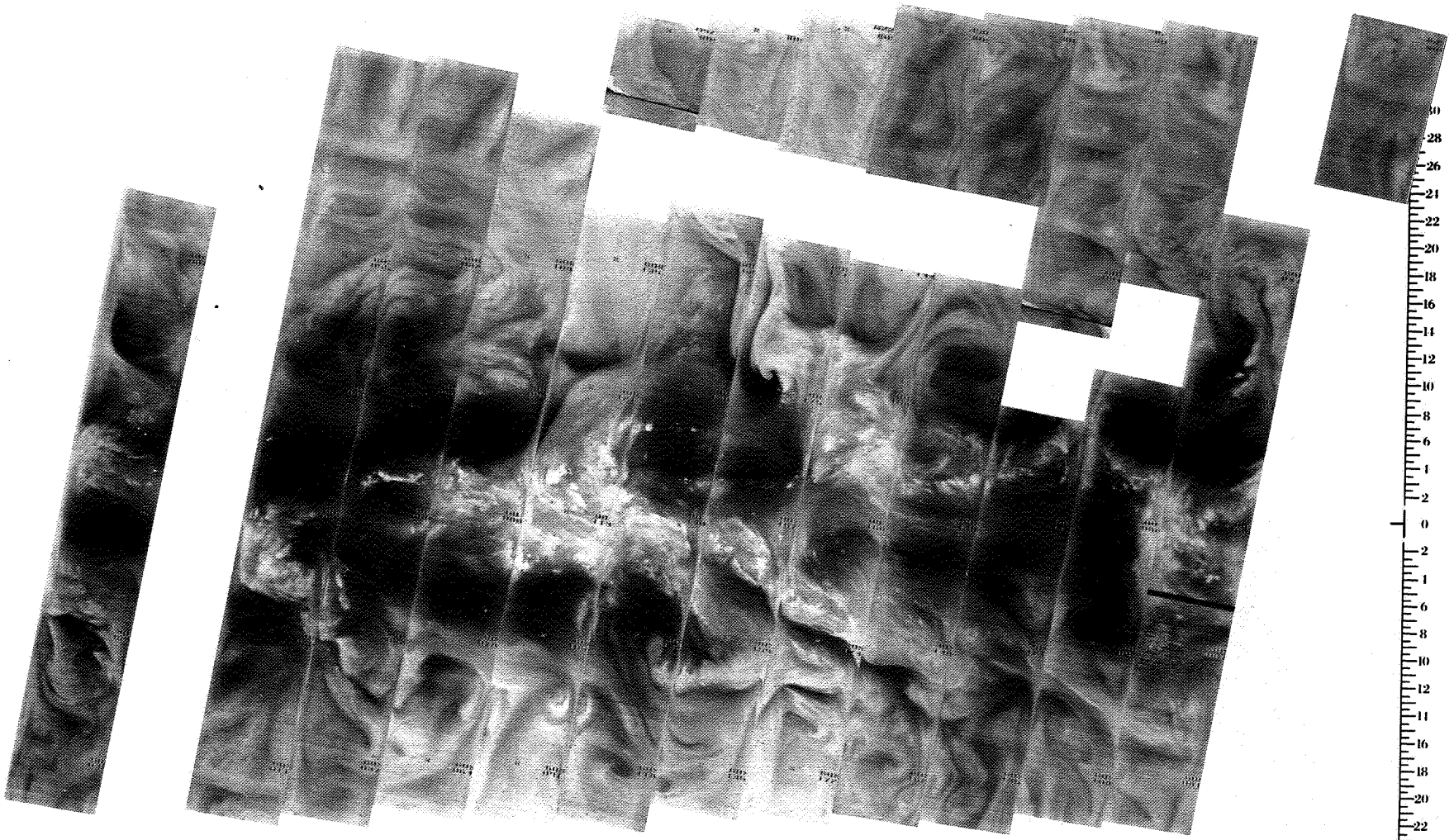
6.7 μm

min.



27 NOVEMBER 1973

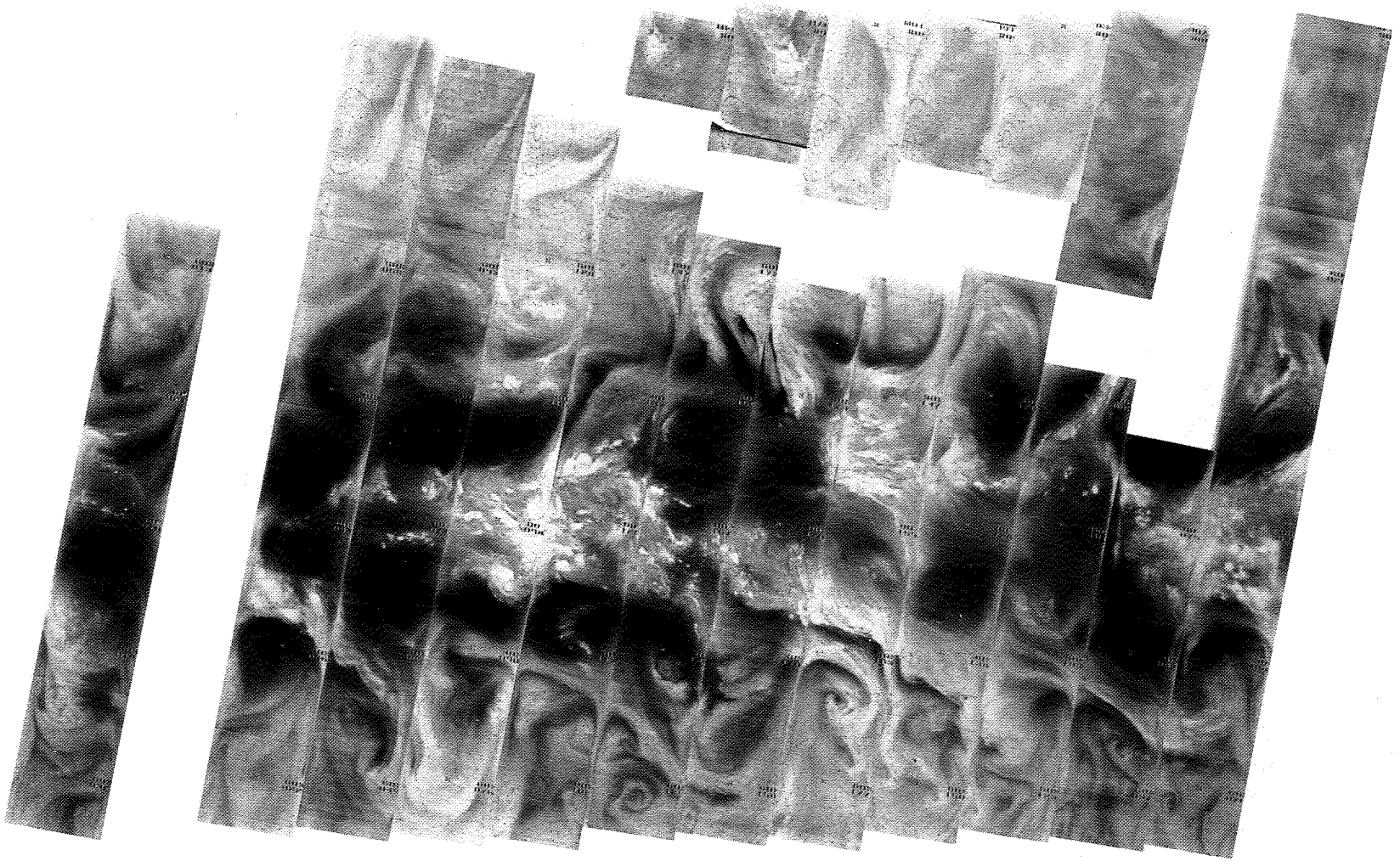
11.5 μm



27 NOVEMBER 1973

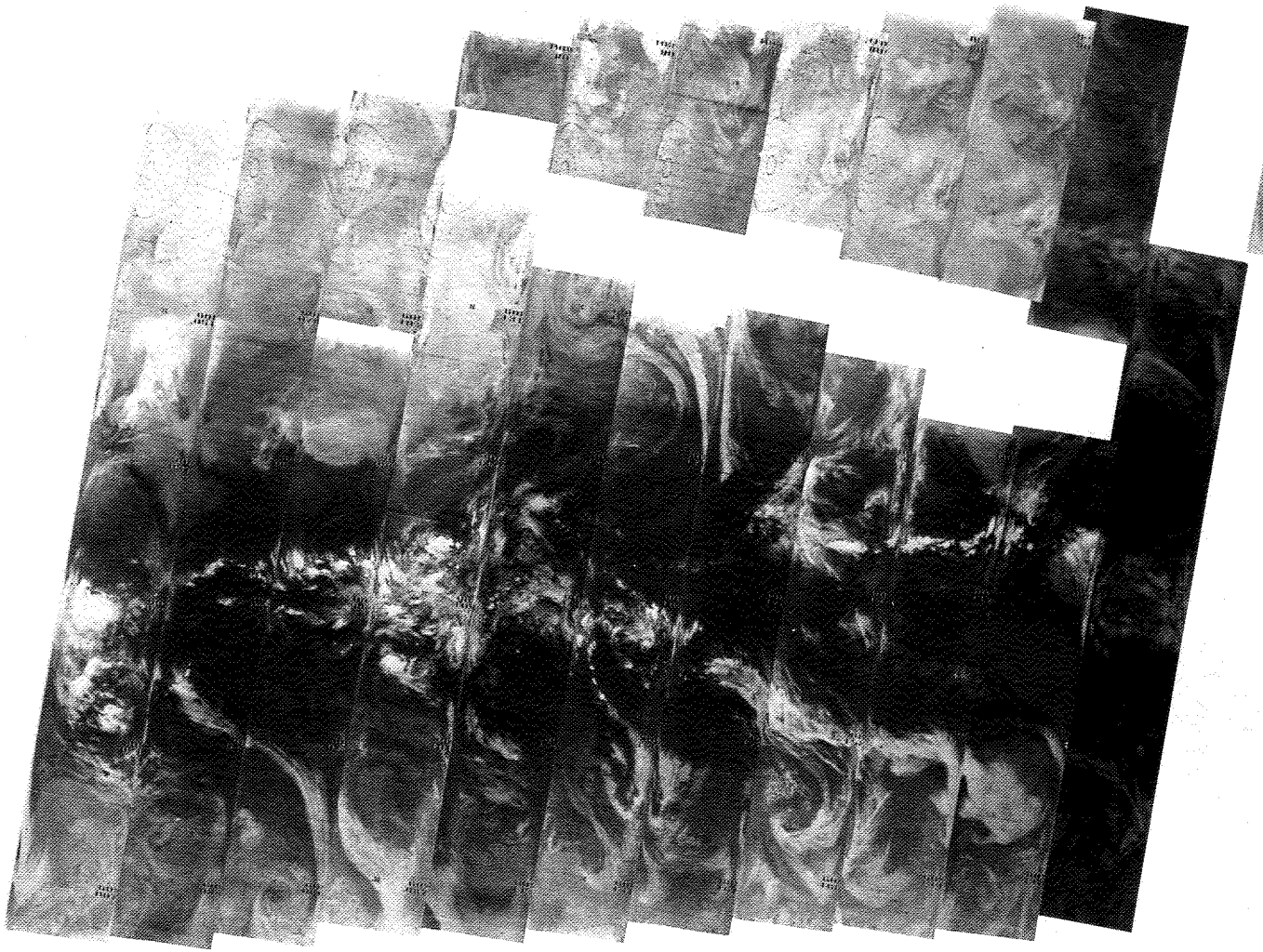
6.7 μm

min.
4734 4733 4732 4731 4730 4729 4728 4727 4726 4725 4724 4723 4722
28 NOVEMBER 1973
11.5 μm
min.



28 NOVEMBER 1973

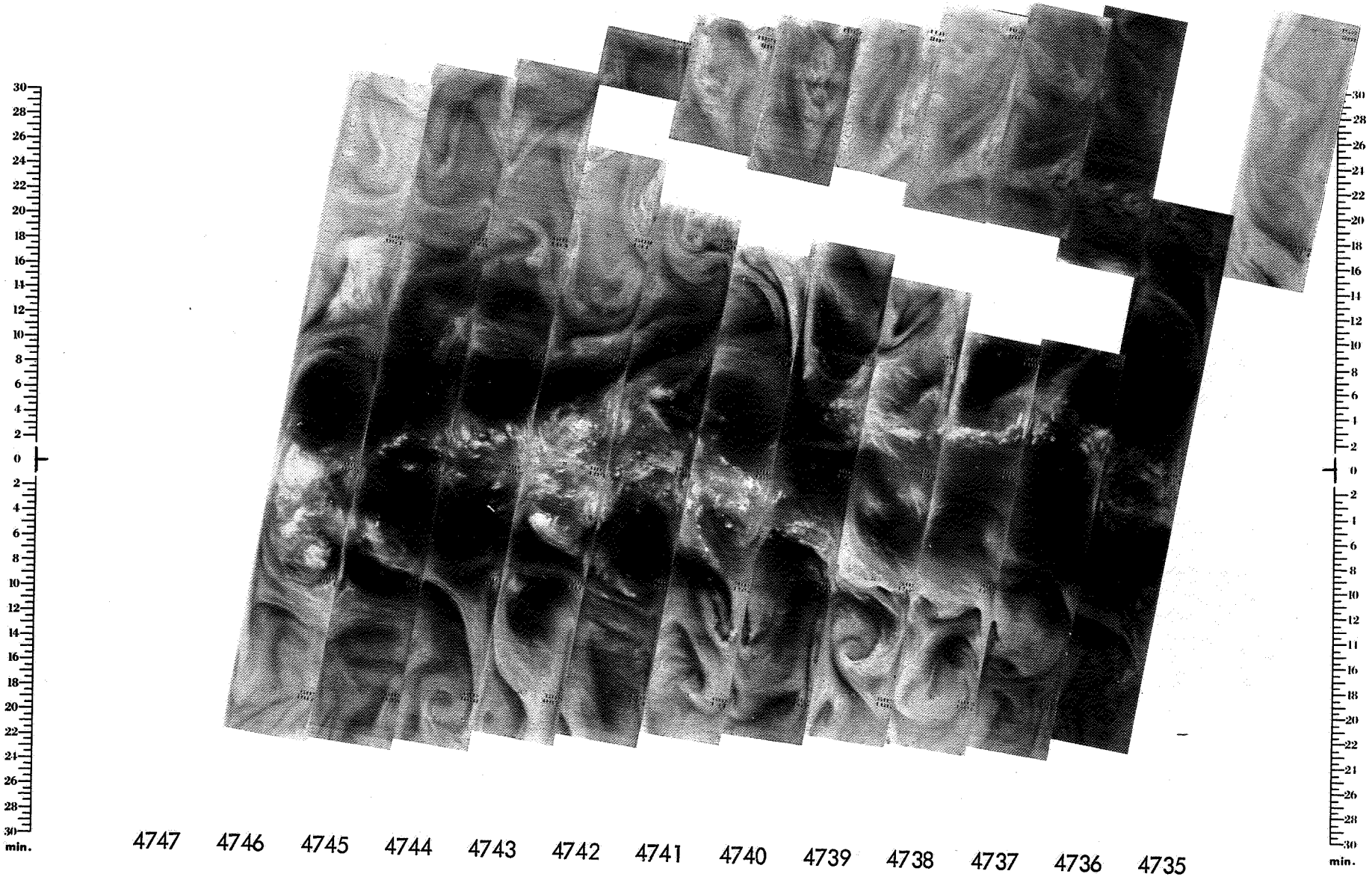
6.7 μm

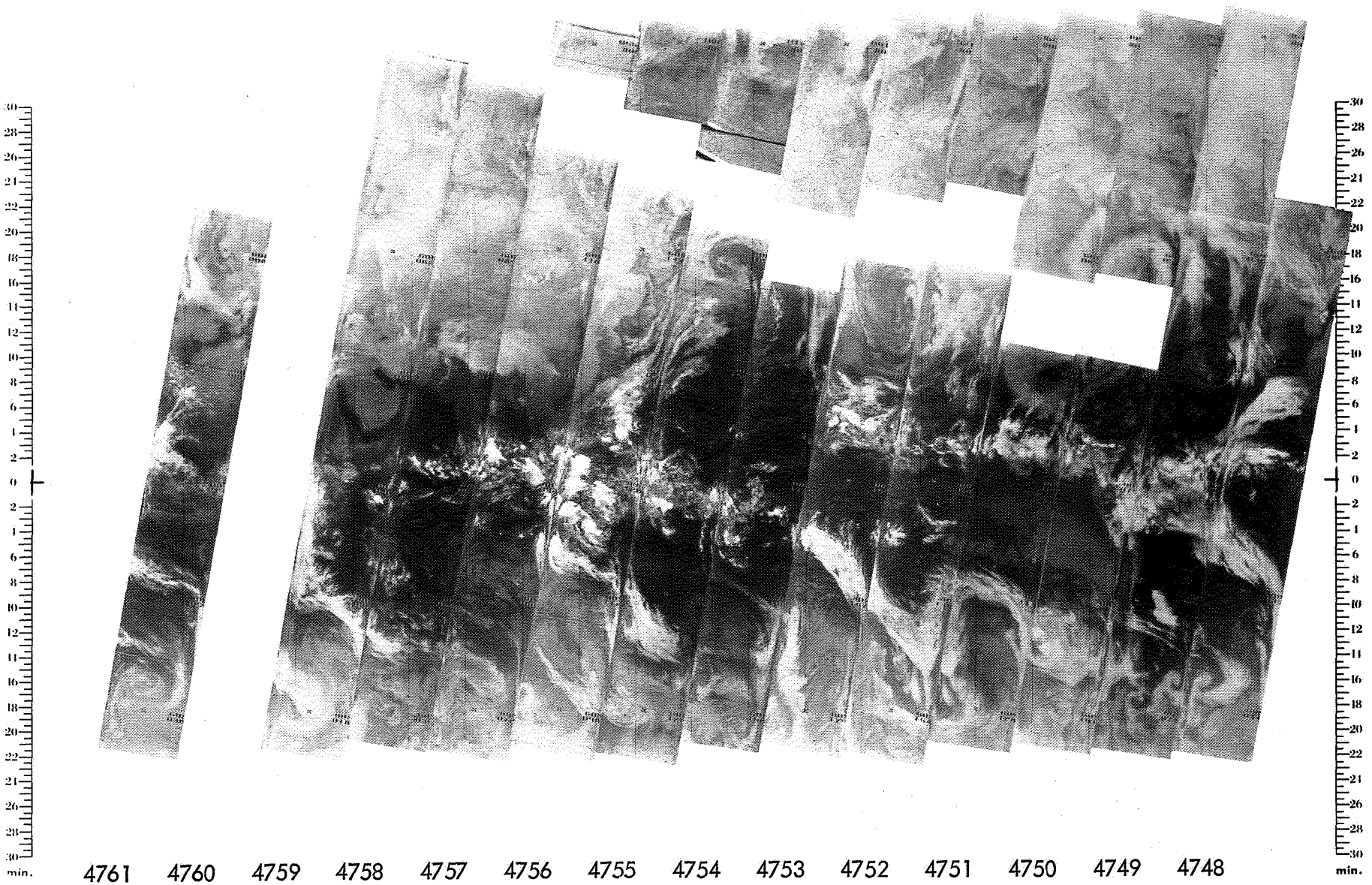


4747 4746 4745 4744 4743 4742 4741 4740 4739 4738 4737 4736 4735

29 NOVEMBER 1973

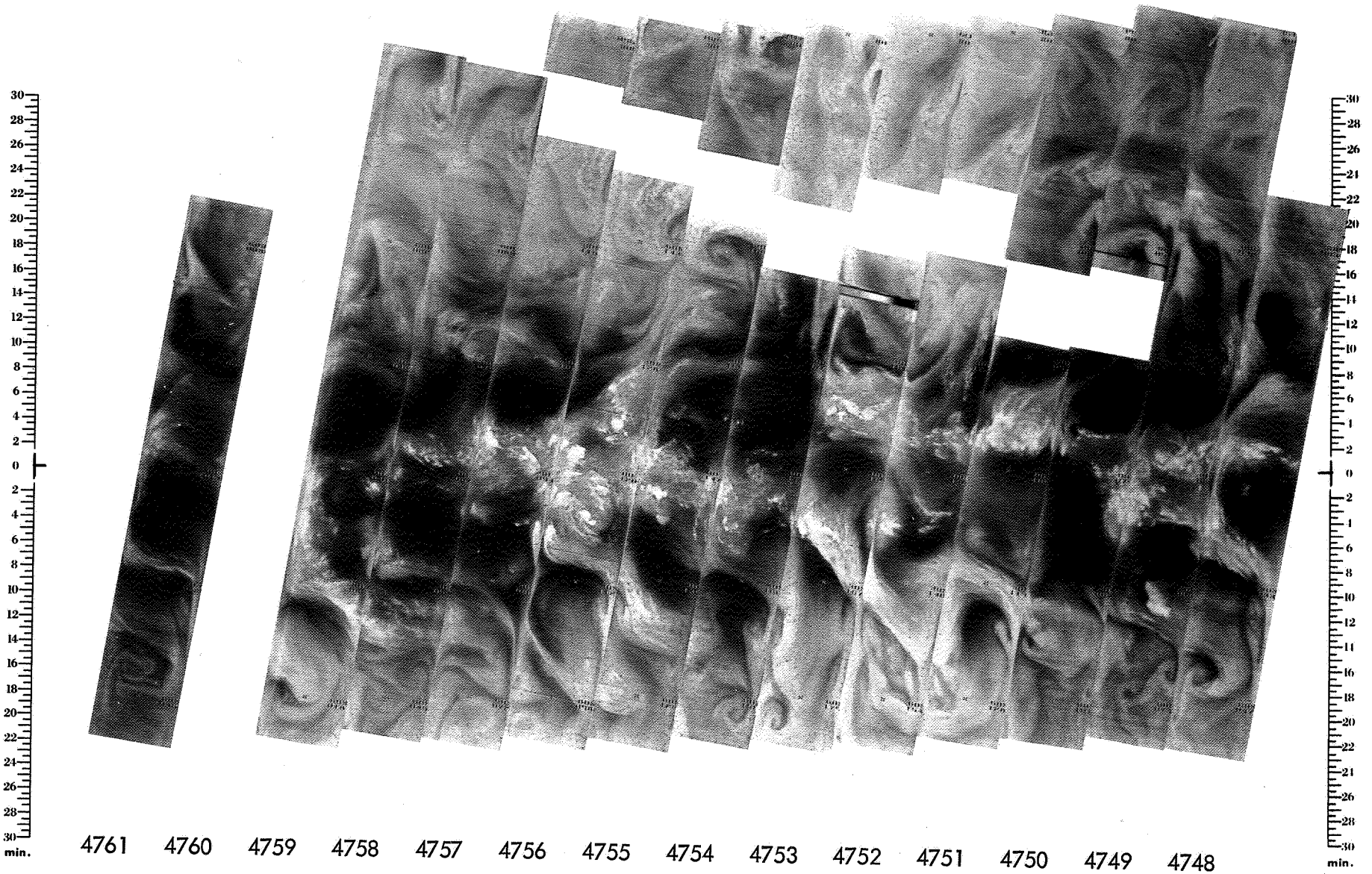
11.5 μm


4747 4746 4745 4744 4743 4742 4741 4740 4739 4738 4737 4736 4735
29 NOVEMBER 1973
6.7 μm
min.
min.



30 NOVEMBER 1973

11.5 μm



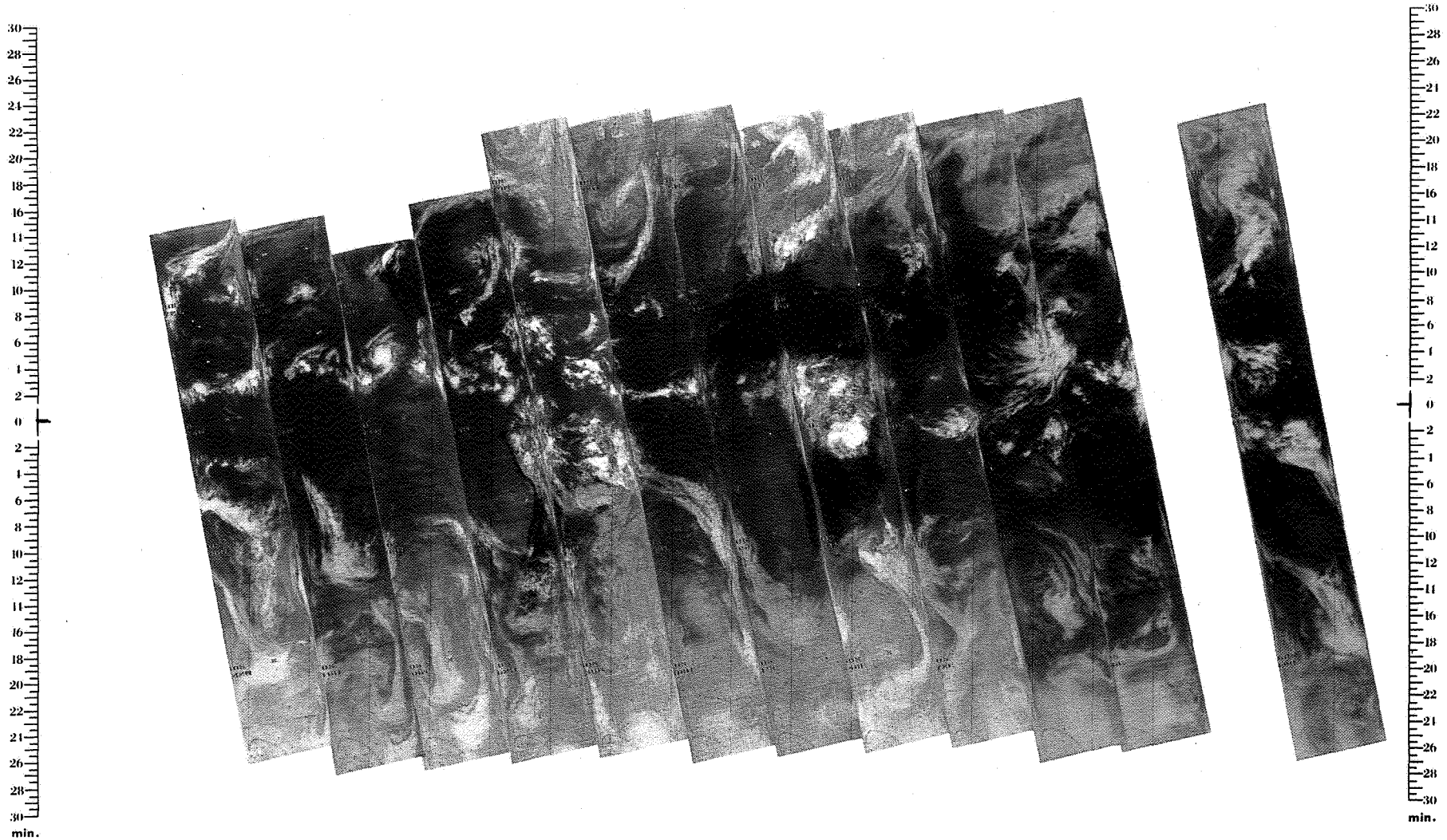
30 NOVEMBER 1973

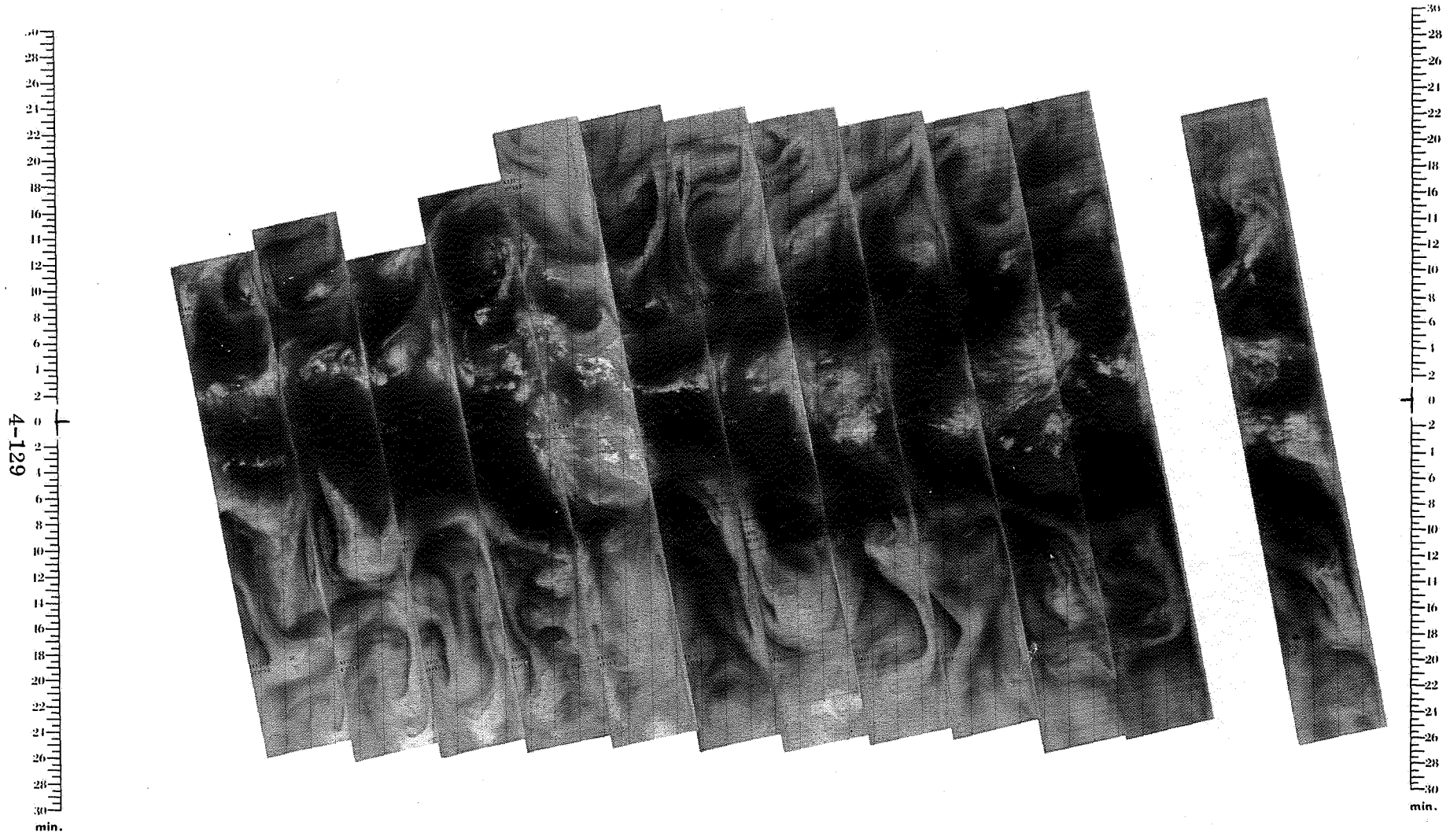
6.7 μm

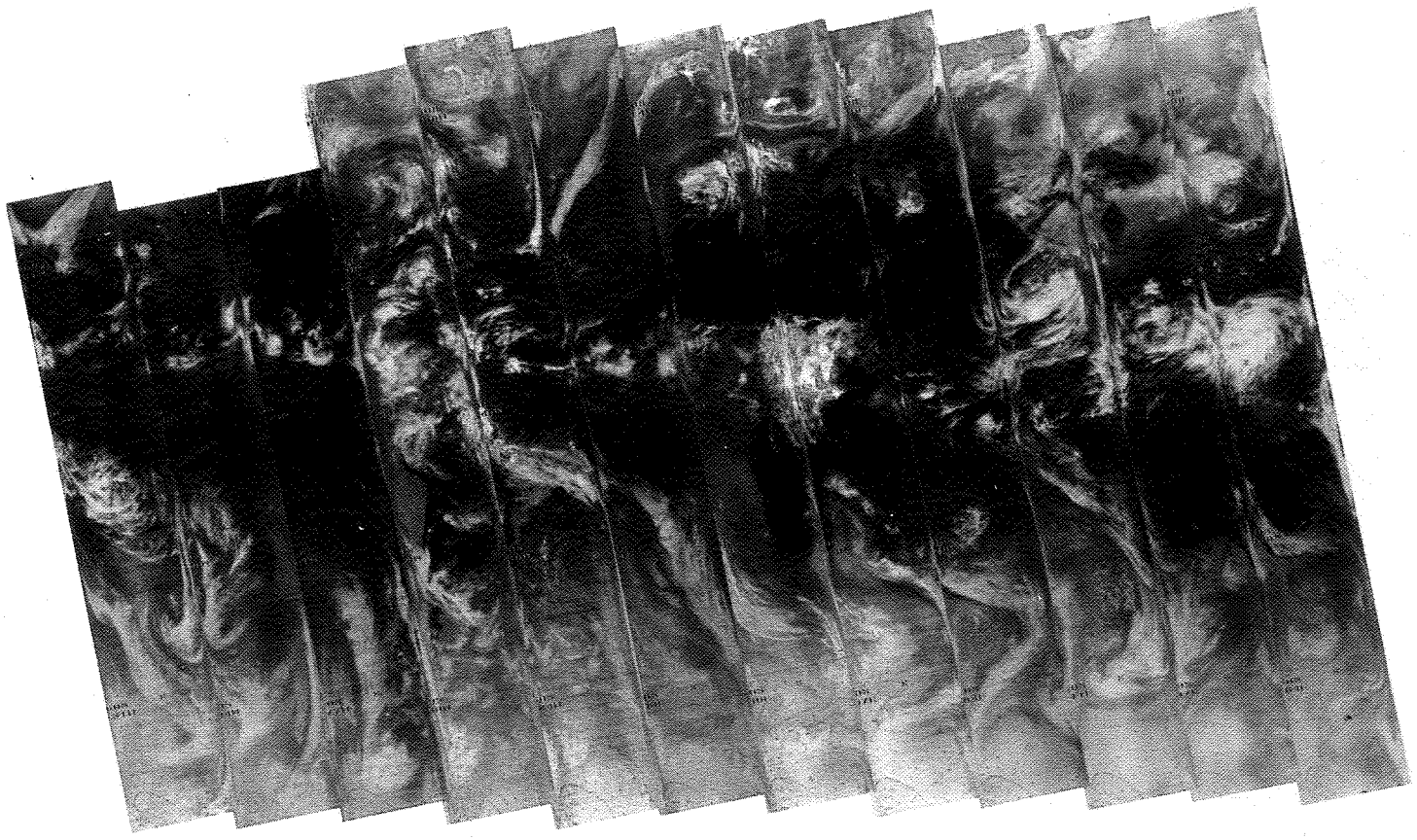
SECTION 4. 2

TEMPERATURE HUMIDITY INFRARED RADIOMETER

DAYTIME MONTAGES


min.
min.
3955 3954 3953 3952 3951 3950 3949 3948 3947 3946 3945 3944 3943
1 OCTOBER 1973
11.5 μm

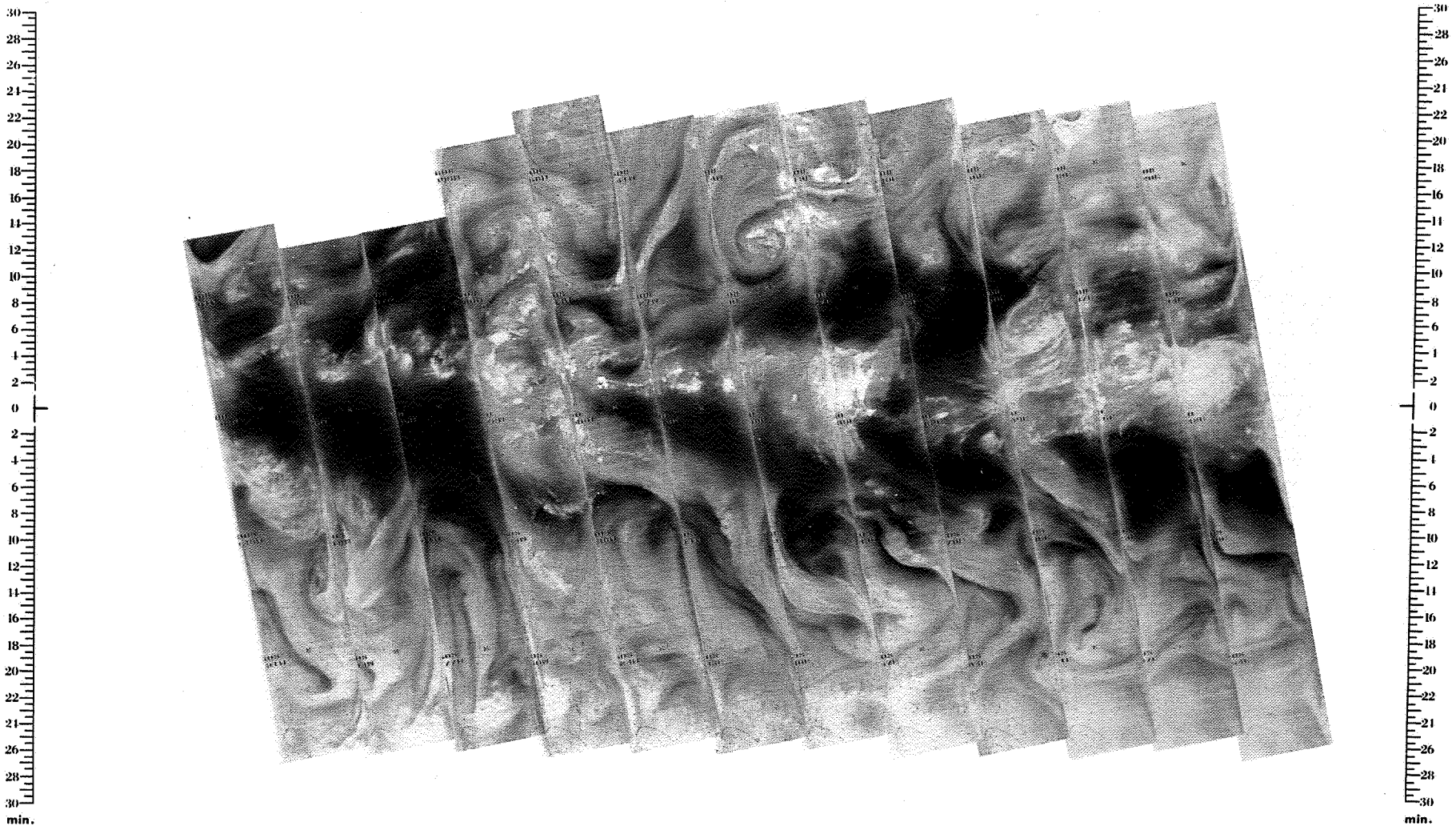

min.
min.
3955
3954
3953
3952
3951
3950
3949
3948
3947
3946
3945
3944
3943
1 OCTOBER 1973
6.7 μm

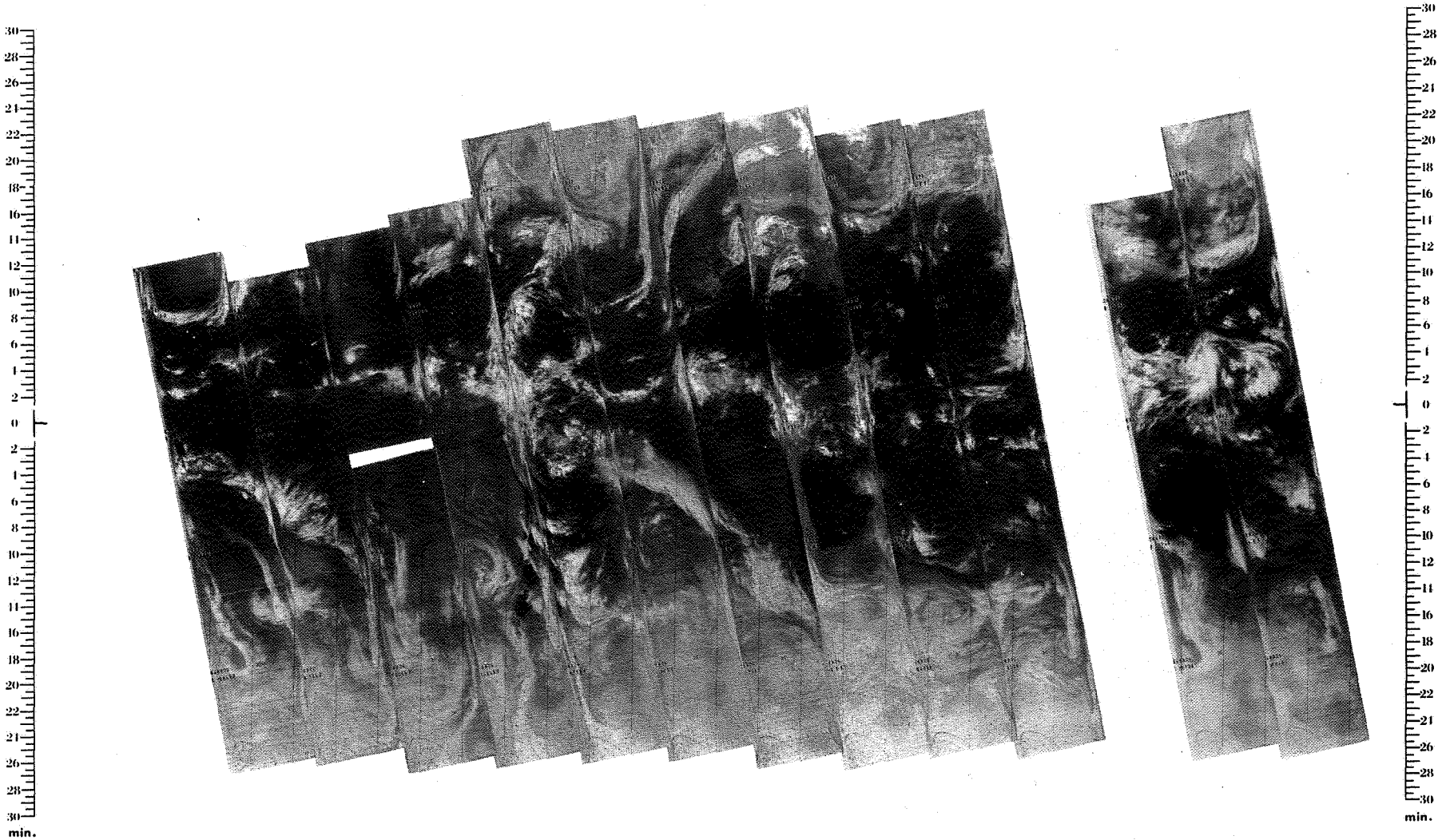


3969 3968 3967 3966 3965 3964 3963 3962 3961 3960 3959 3958 3957 3956

2 OCTOBER 1973

11.5 μm

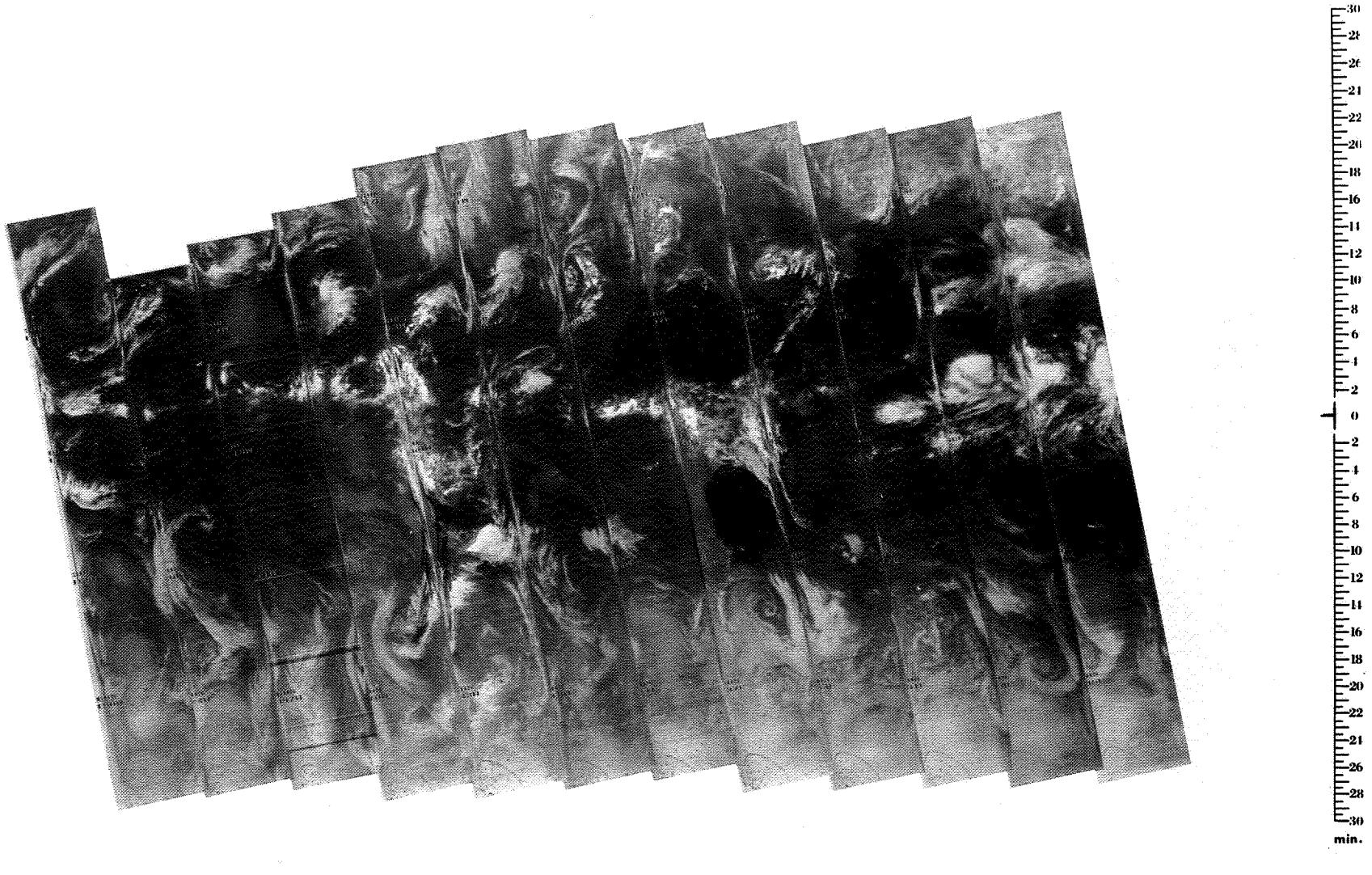

min.
min.
3969 3968 3967 3966 3965 3964 3963 3962 3961 3960 3959 3958 3957 3956
2 OCTOBER 1973
6.7 μm


min.
min.
3982 3981 3980 3979 3978 3977 3976 3975 3974 3973 3972 3971 3970
3 OCTOBER 1973
11.5 μm

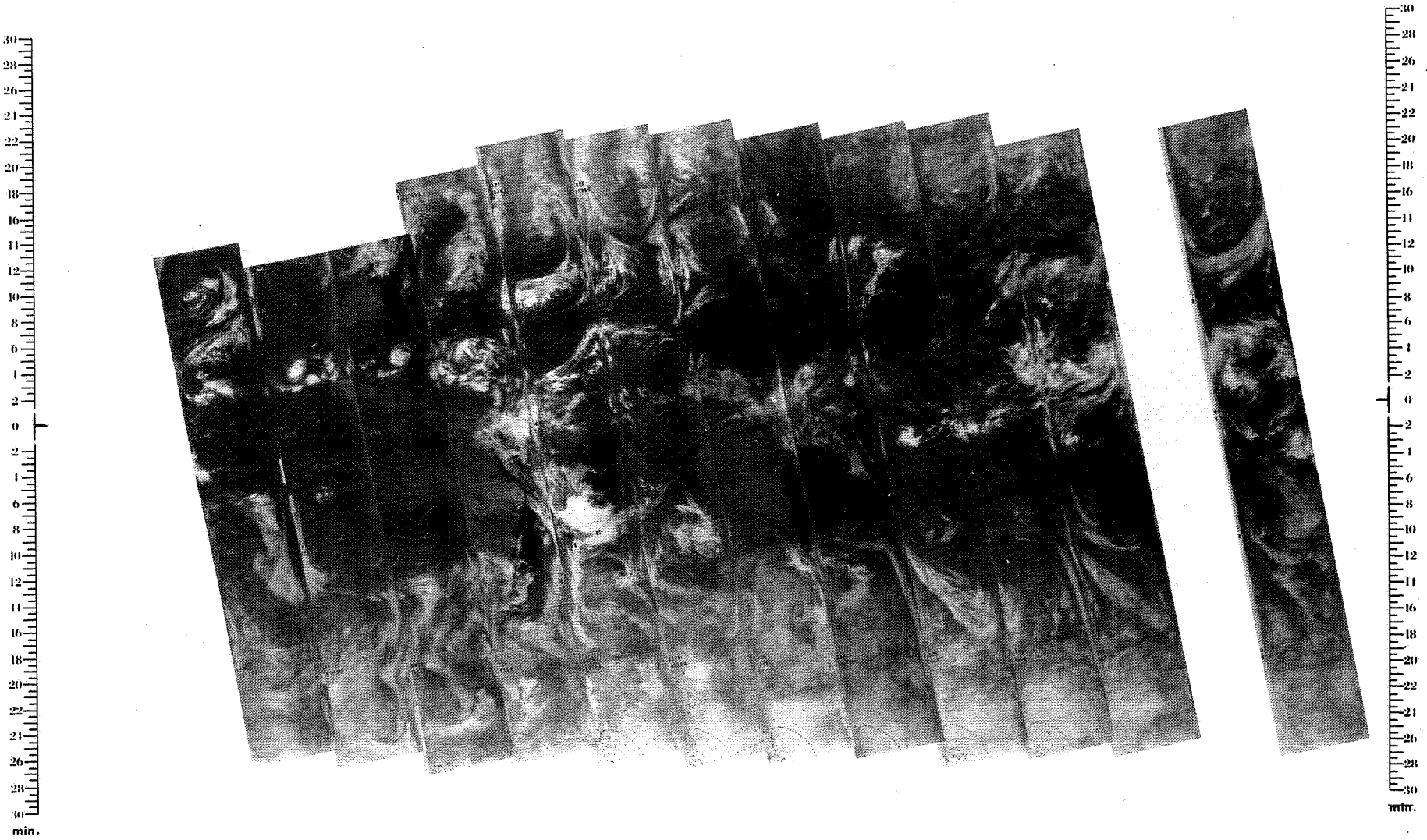
min.
3970
3971
3972
3973
3974
3975
3976
3977
3978
3979
3980
3981
3982
3 OCTOBER 1973
6.7 μm
min.

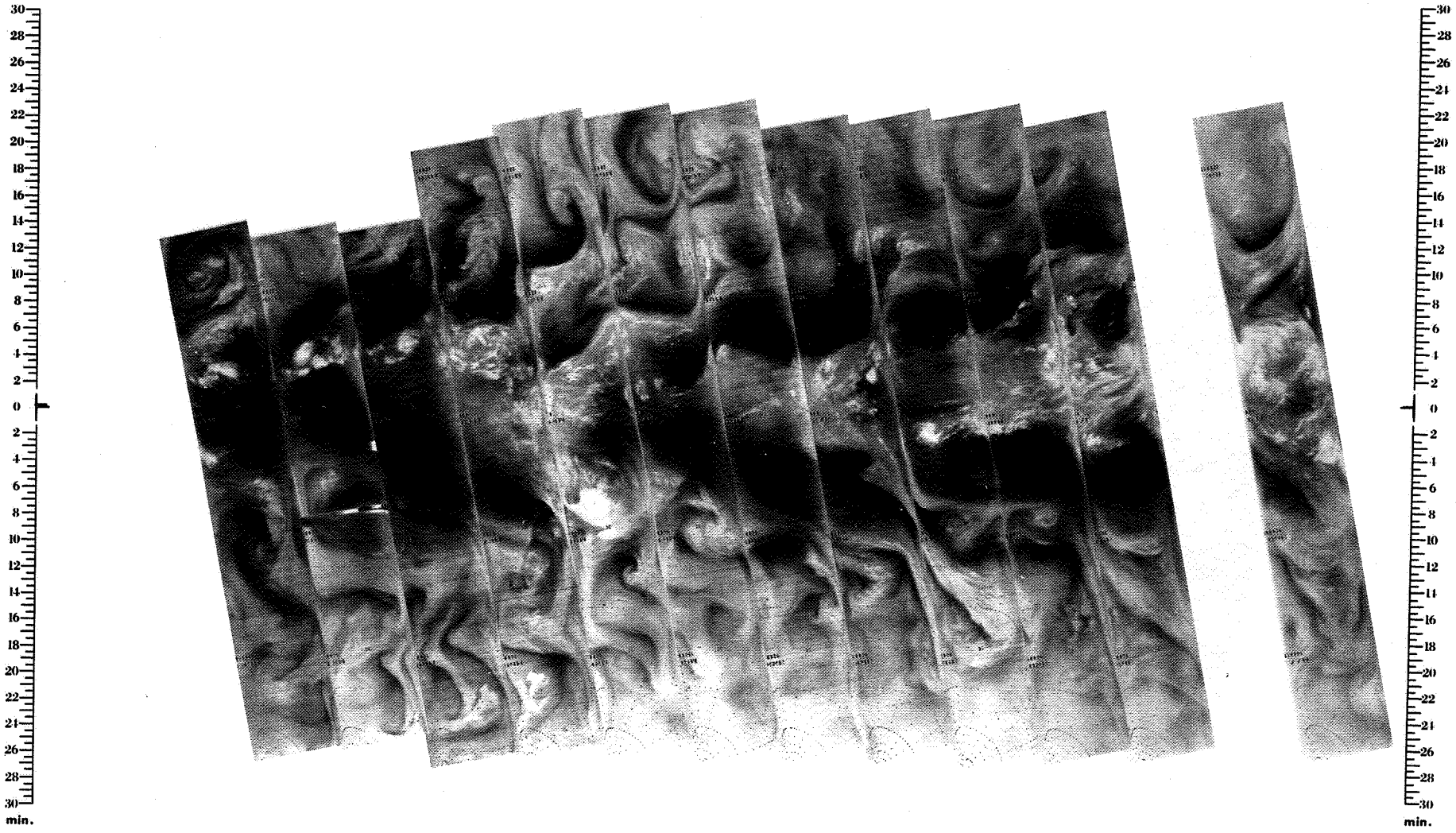
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 min.
3983
3984
3985
3986
3987
3988
3989
3990
3991
3992
3993
3994
3995
3996
4 OCTOBER 1973
11.5 μm

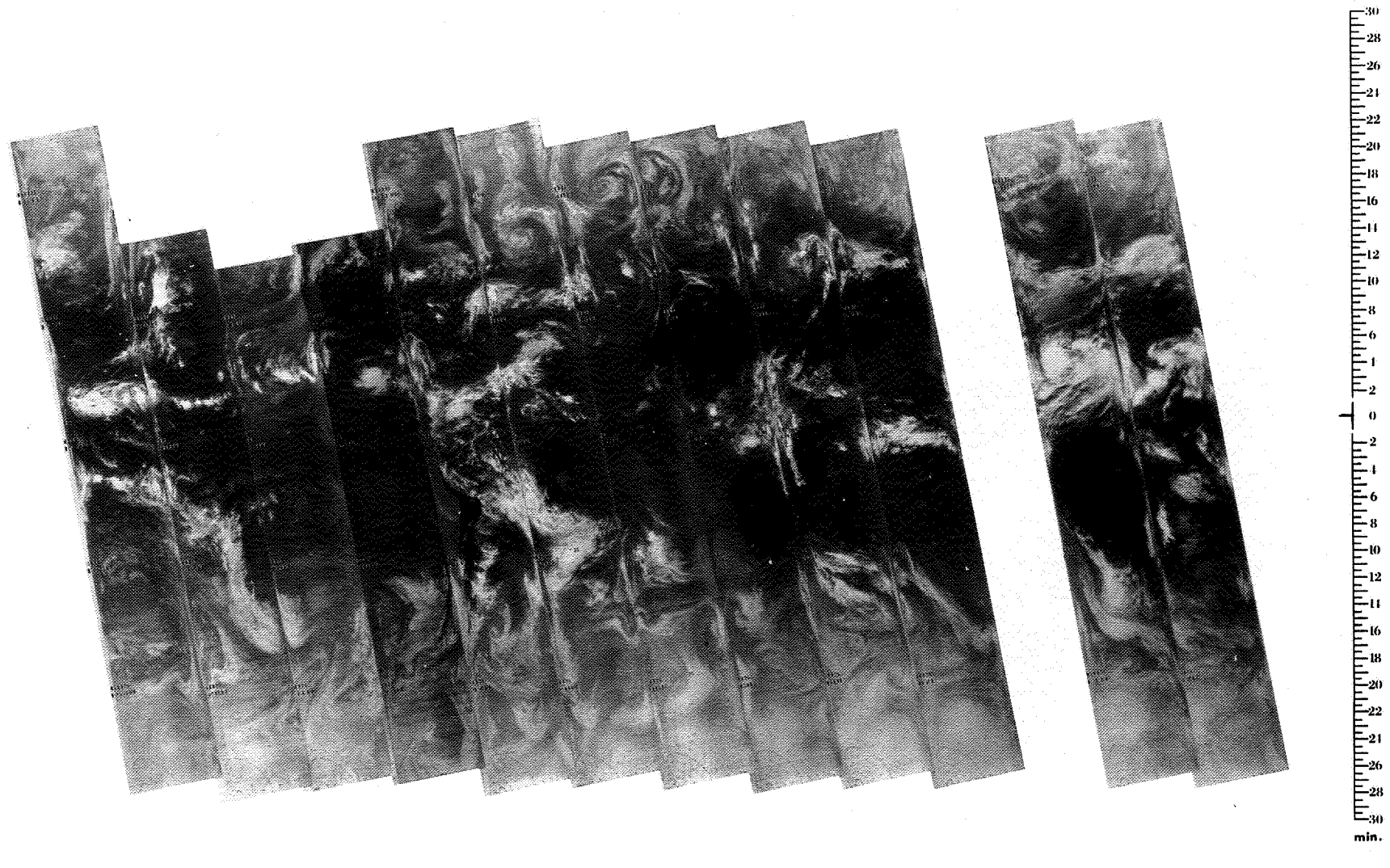
min.
3983
3984
3985
3986
3987
3988
3989
3990
3991
3992
3993
3994
3995
3996
4 OCTOBER 1973
6.7 μm

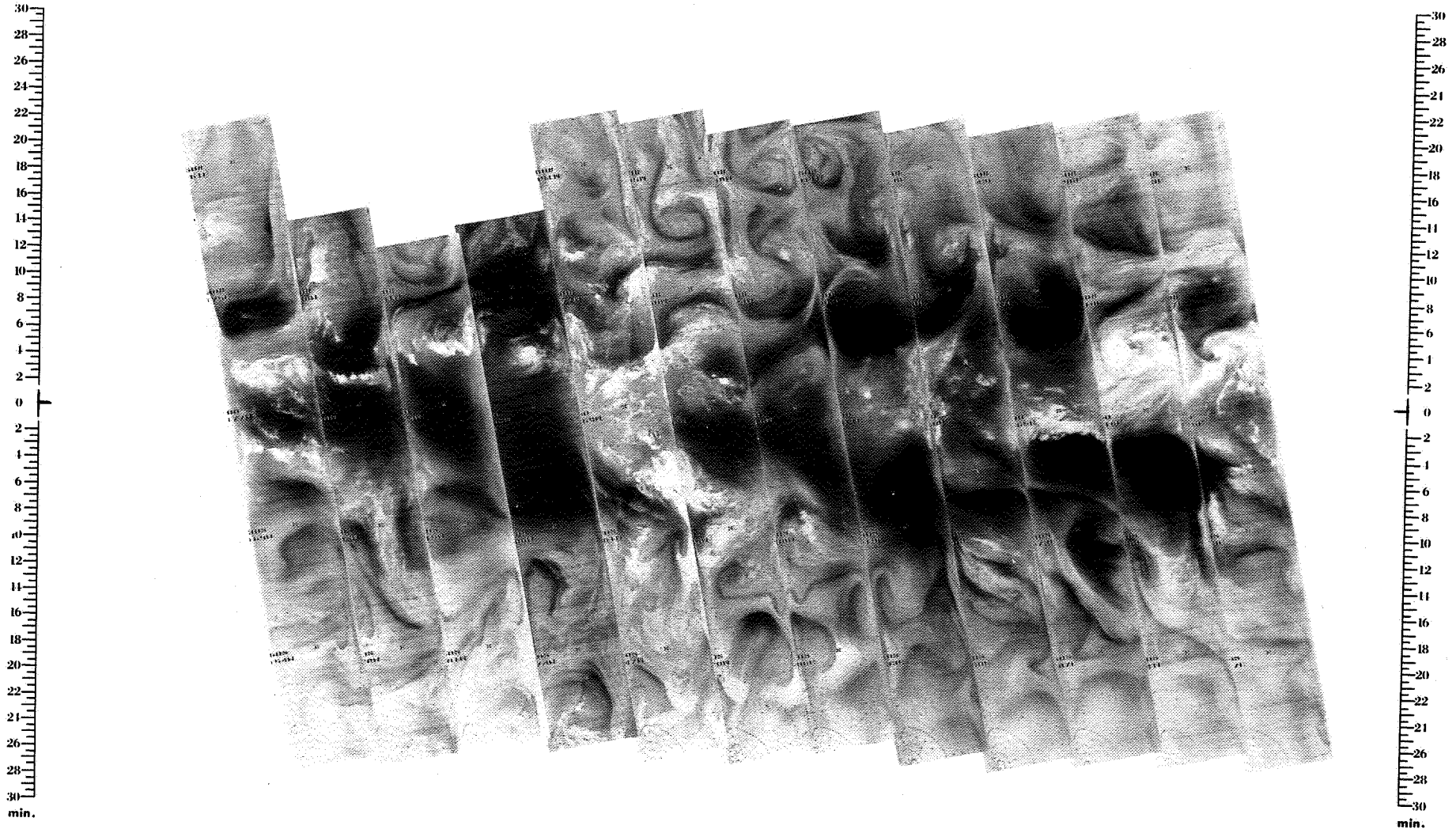

4009
4008
4007
4006
4005
4004
4003
4002
4001
4000
3999
3998
3997
5 OCTOBER 1973
11.5 μm
min.
min.

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 min.
3997 3998 3999 4000 4001 4002 4003 4004 4005 4006 4007 4008 4009
5 OCTOBER 1973
6.7 μm
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 min.

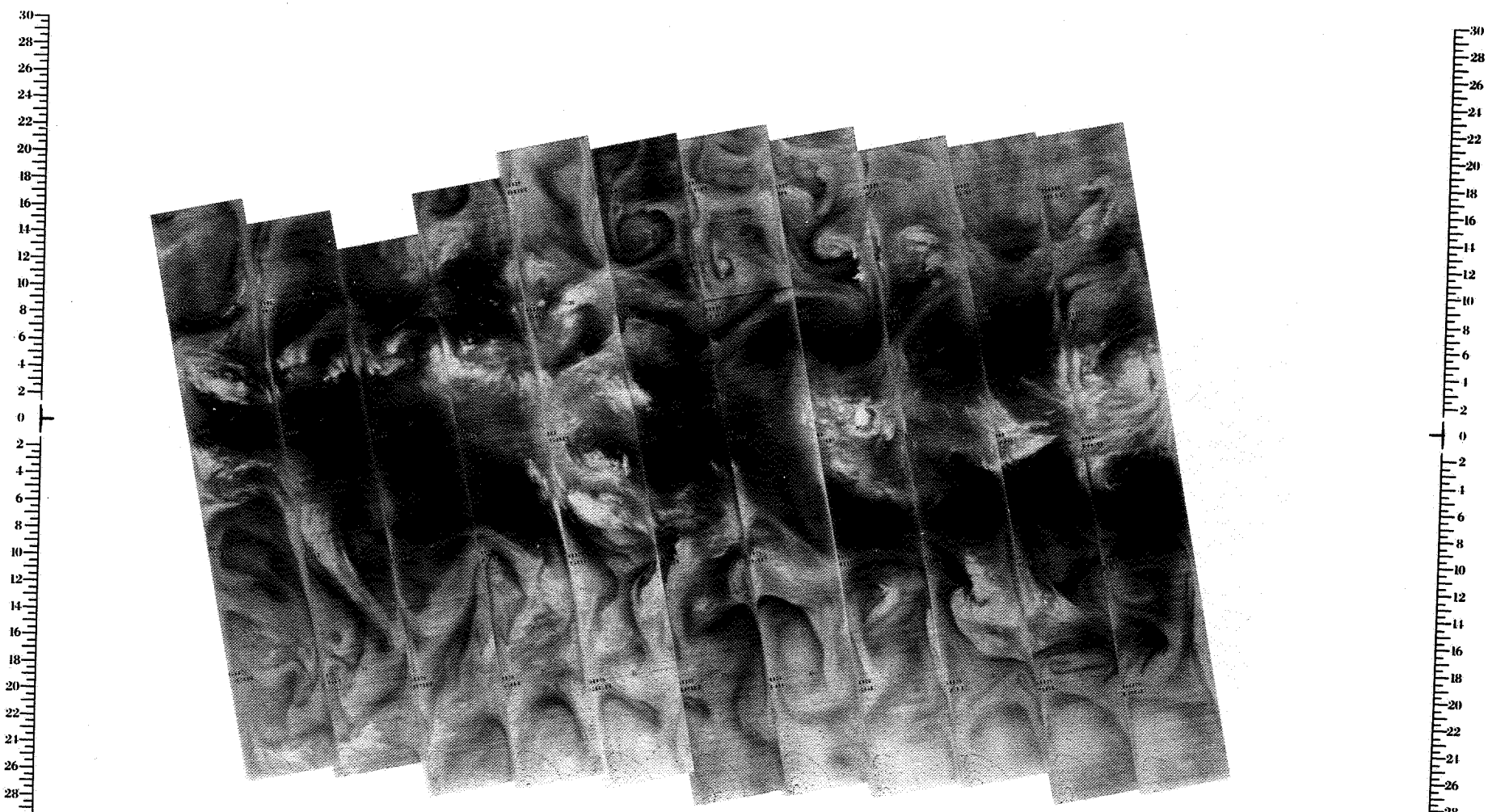

4022 4021 4020 4019 4018 4017 4016 4015 4014 4013 4012 4011 4010
6 OCTOBER 1973
11.5 μm
min.
min.

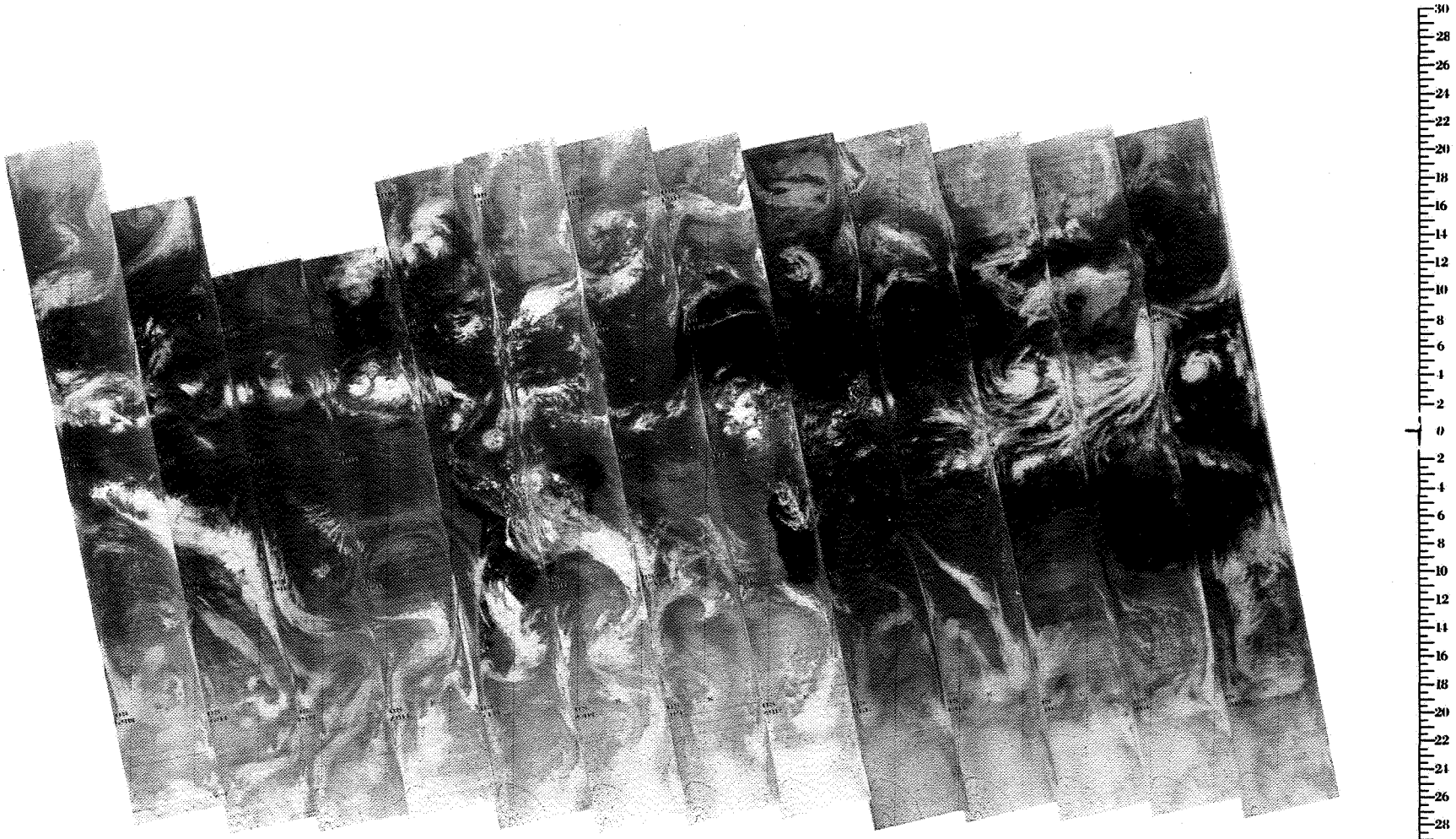

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4022 4021 4020 4019 4018 4017 4016 4015 4014 4013 4012 4011 4010
6 OCTOBER 1973
6.7 μm

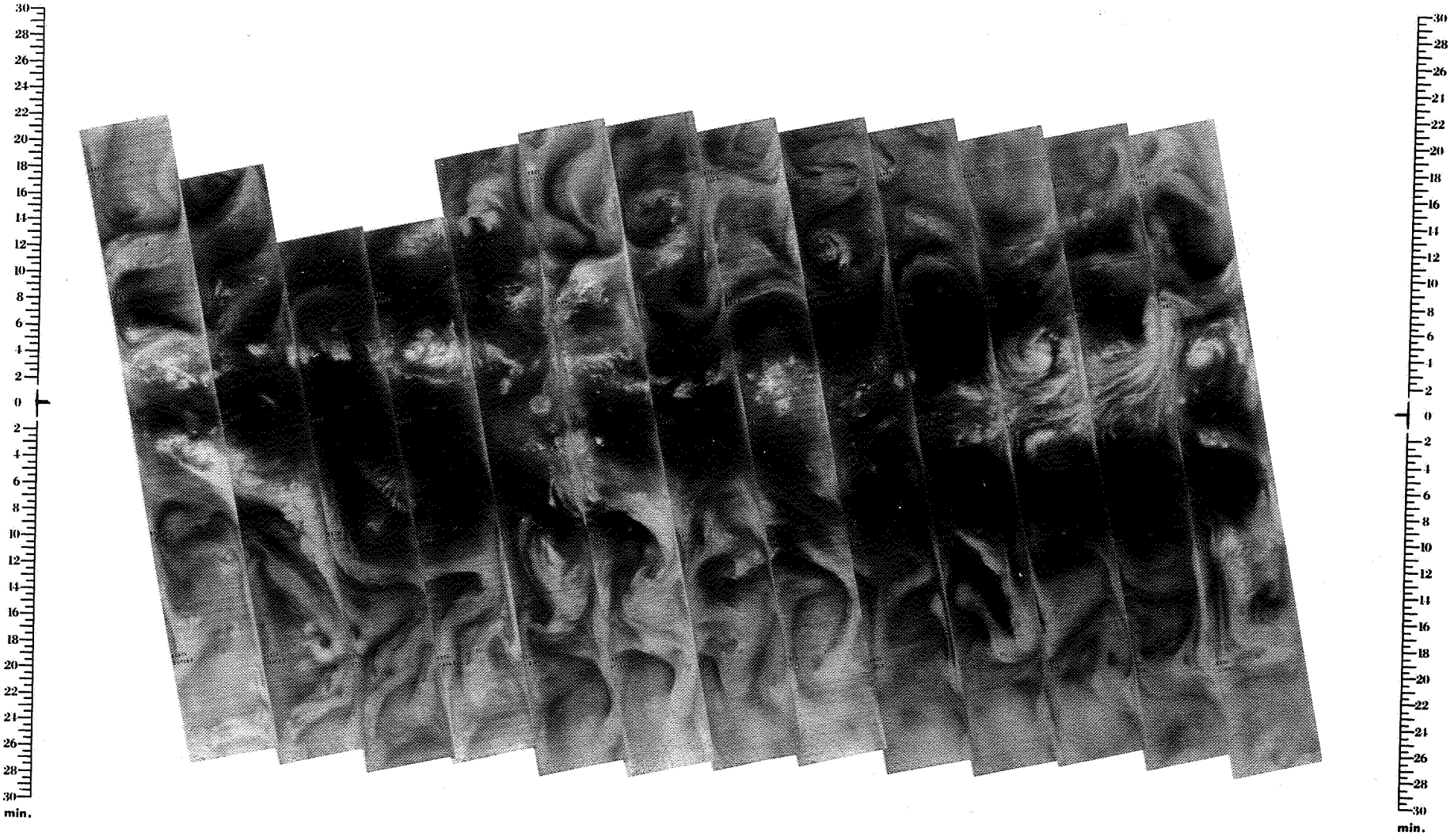

4036
4035
4034
4033
4032
4031
4030
4029
4028
4027
4026
4025
4024
4023
7 OCTOBER 1973
11.5 μm
min.
min.

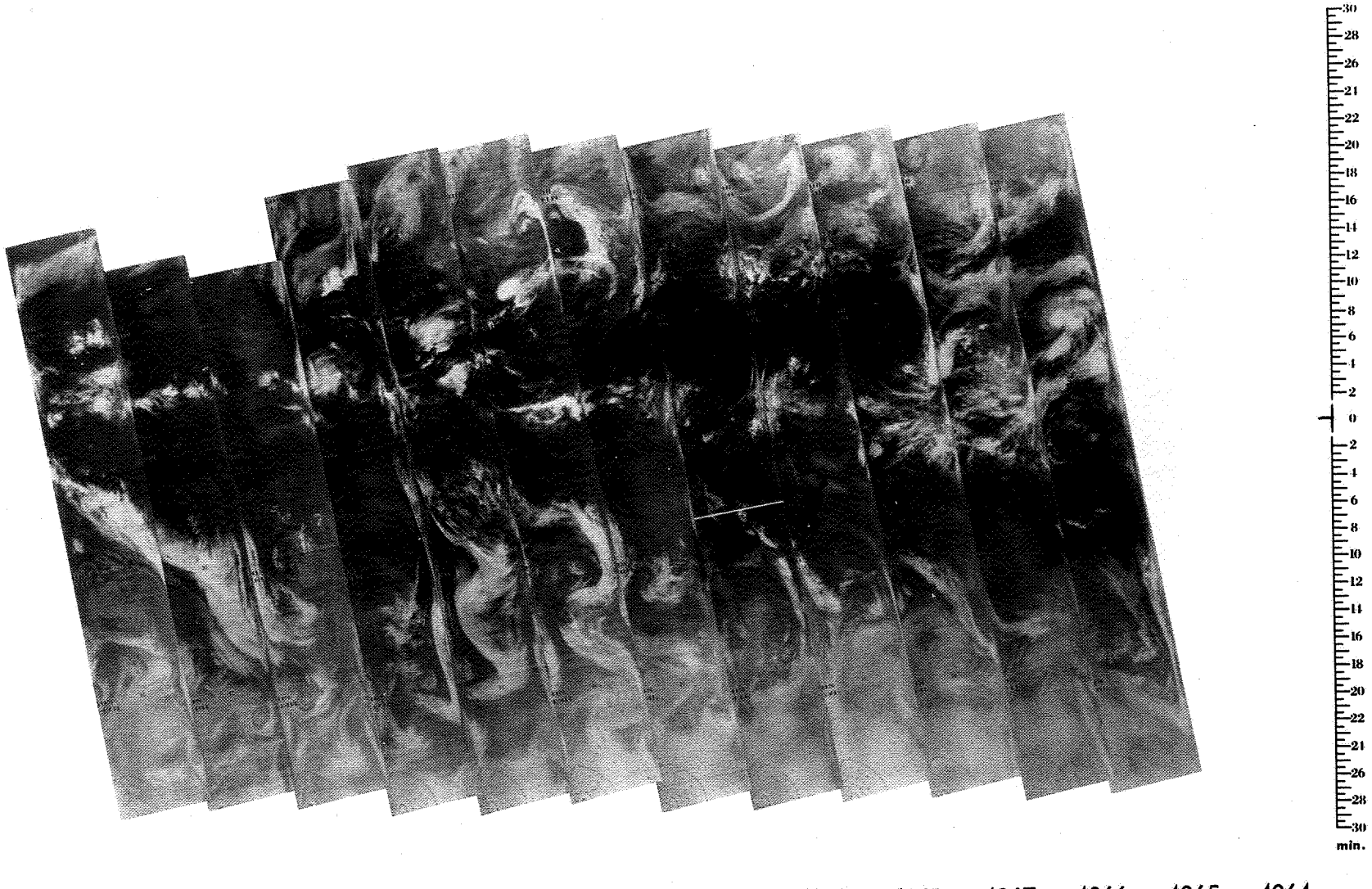

min.
min.
4036 4035 4034 4033 4032 4031 4030 4029 4028 4027 4026 4025 4024 4023
7 OCTOBER 1973
6.7μm

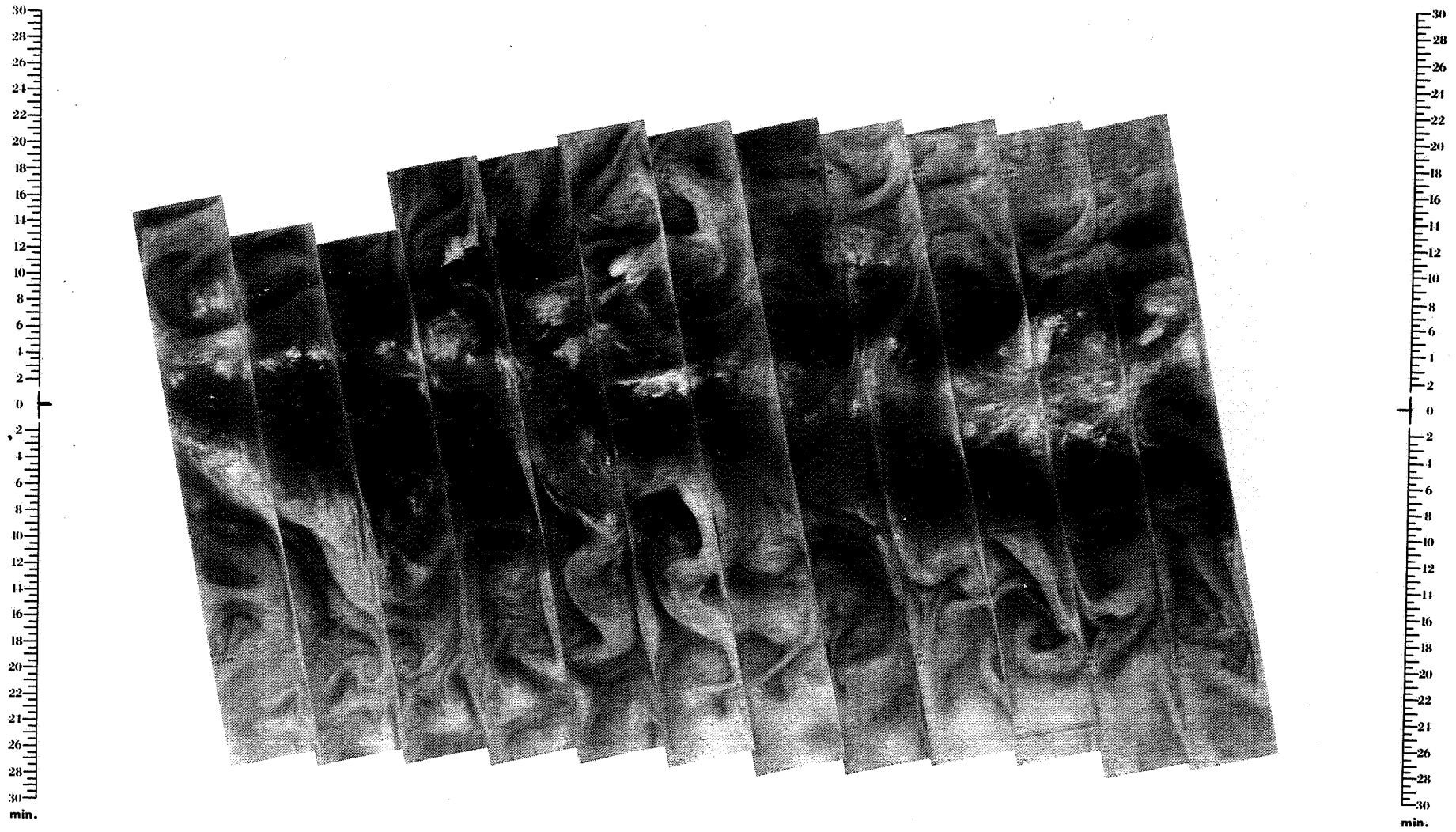
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 min.
4037 4038 4039 4040 4041 4042 4043 4044 4045 4046 4047 4048 4049
8 OCTOBER 1973
11.5 μm

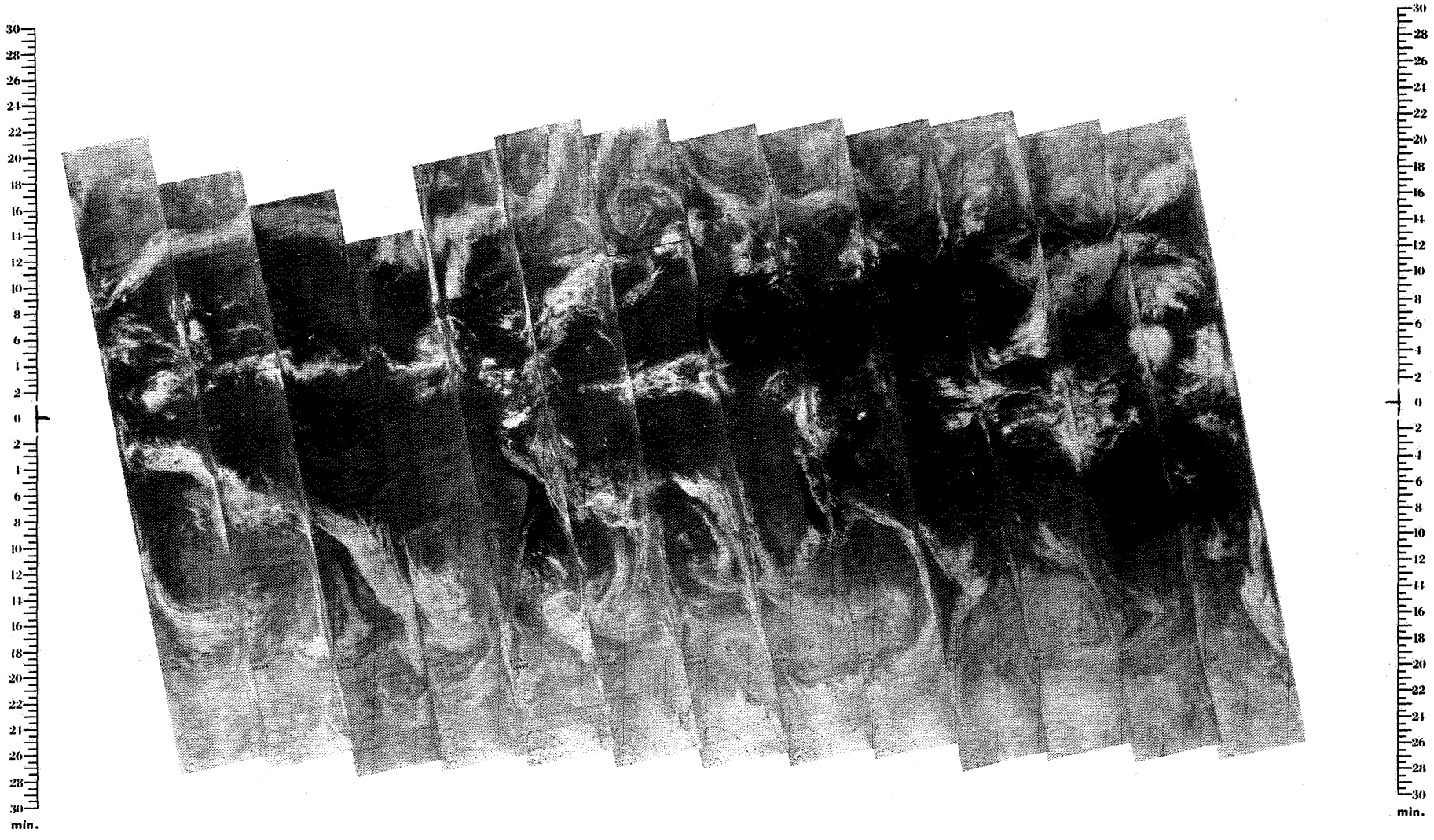

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4049 4048 4047 4046 4045 4044 4043 4042 4041 4040 4039 4038 4037
8 OCTOBER 1973
6.7 μm

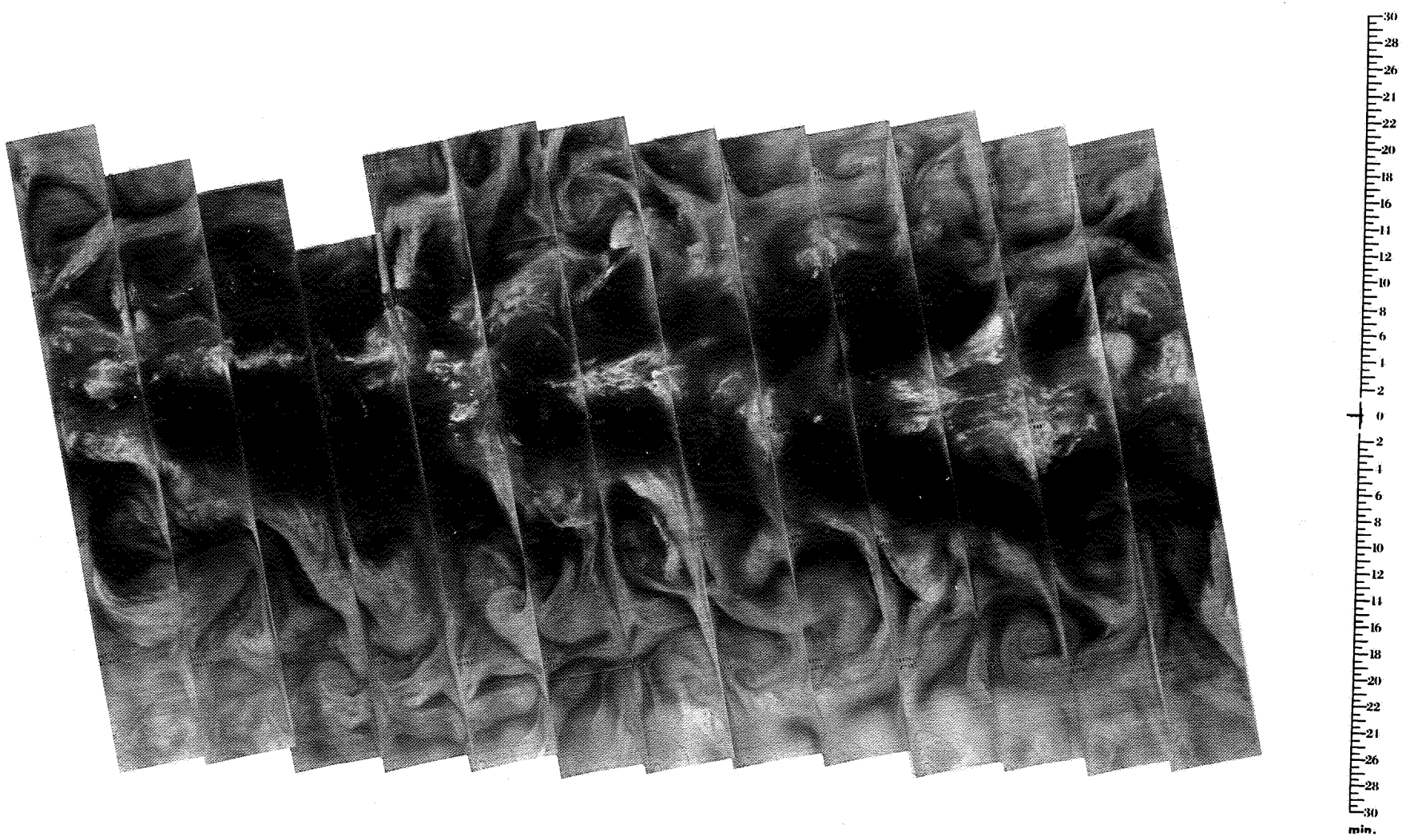

4063 4062 4061 4060 4059 4058 4057 4056 4055 4054 4053 4052 4051 4050
9 OCTOBER 1973
11.5 μm
min.

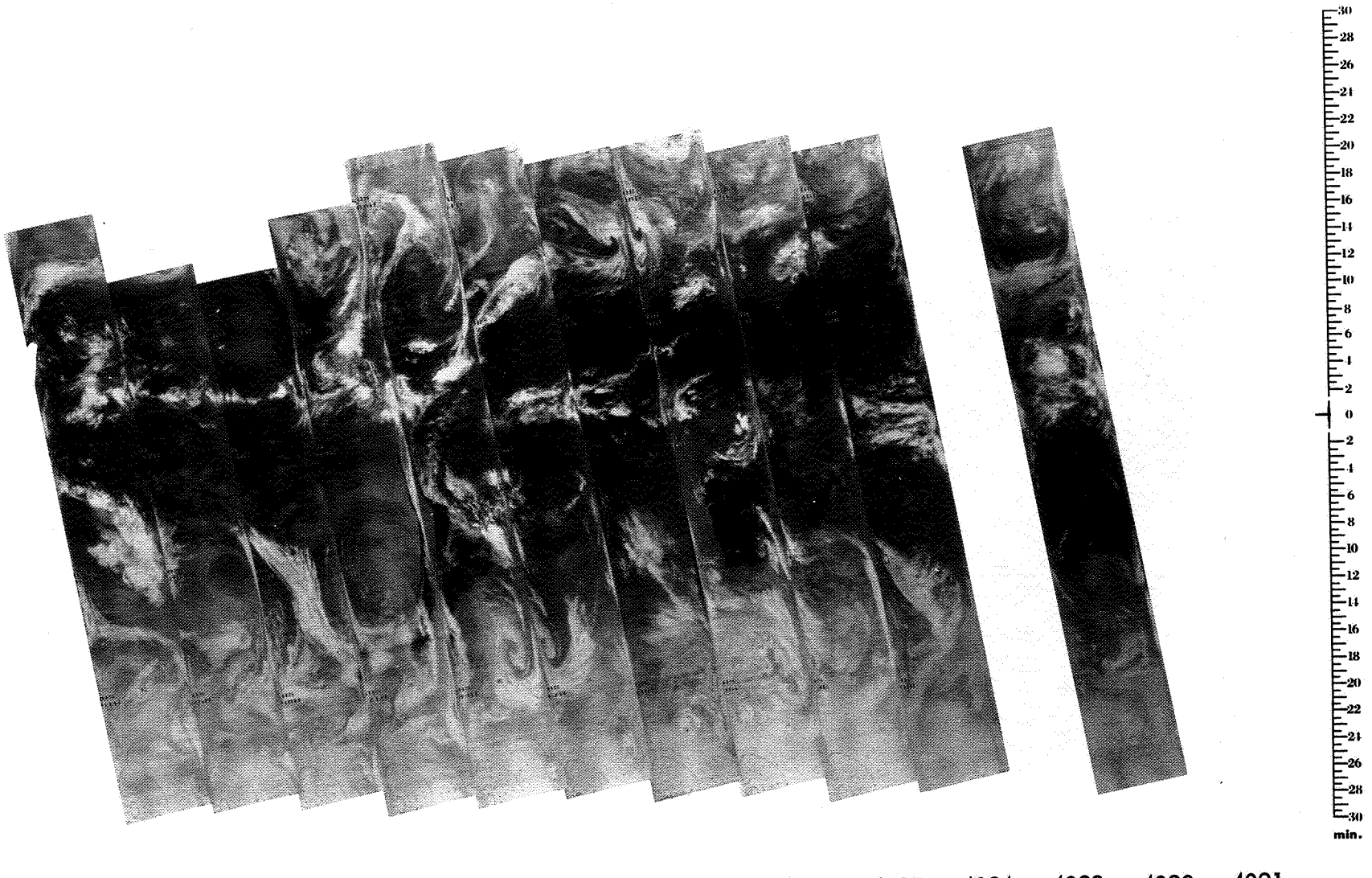

min.
min.
4063
4062
4061
4060
4059
4058
4057
4056
4055
4054
4053
4052
4051
4050
9 OCTOBER 1973
6.7 μm

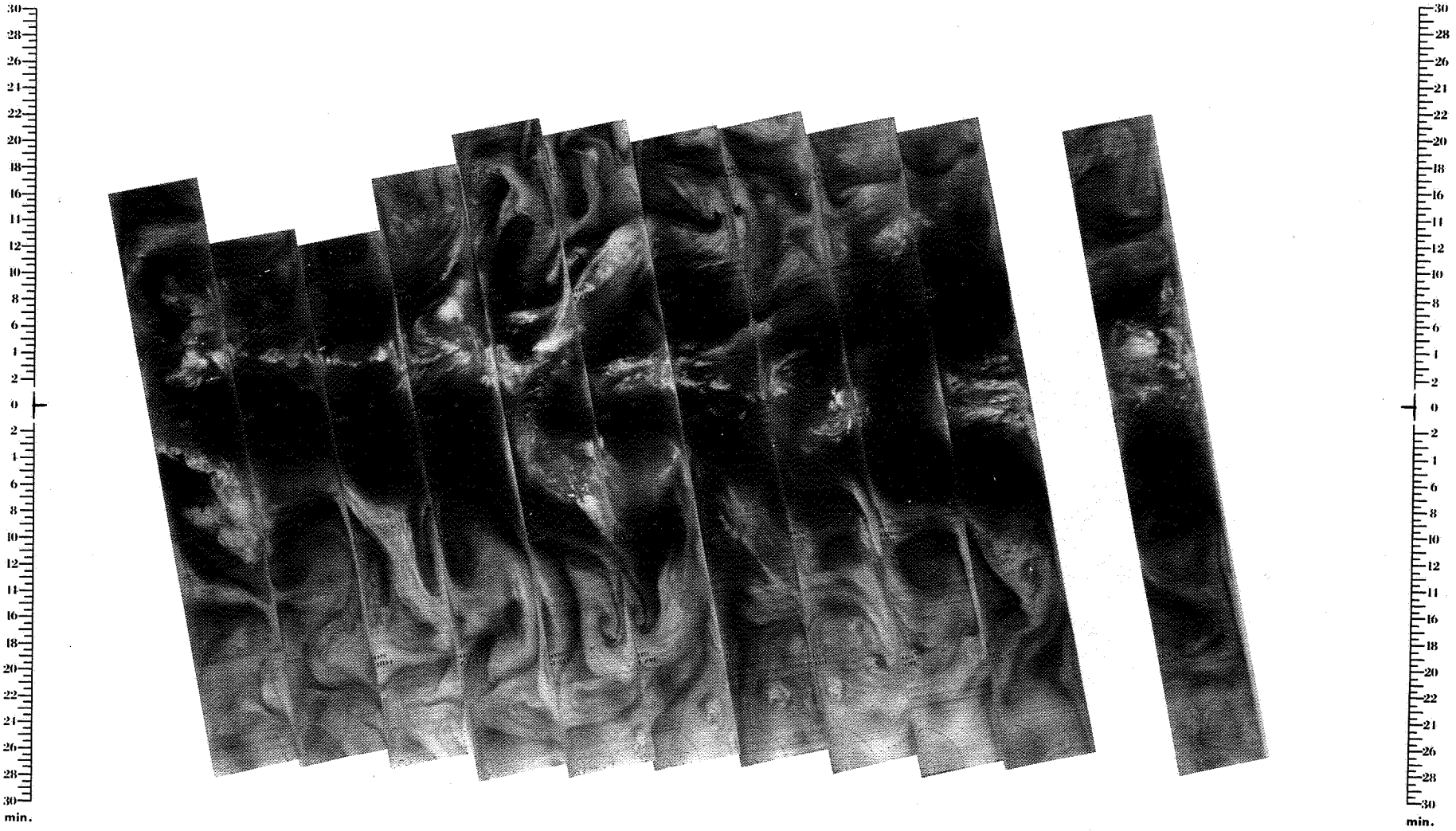

4076 4075 4074 4073 4072 4071 4070 4069 4068 4067 4066 4065 4064
10 OCTOBER 1973
11.5 μm
min.
min.

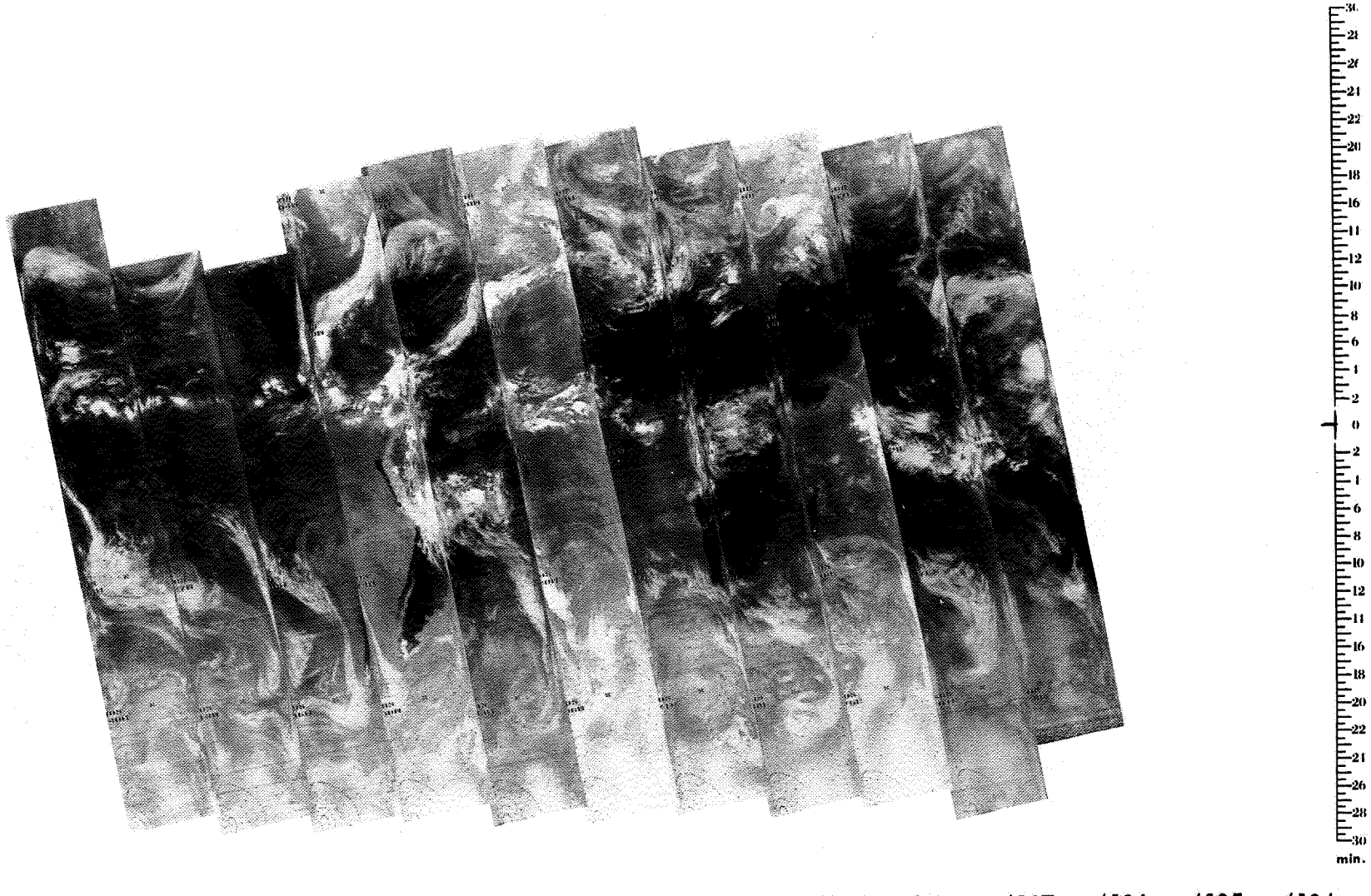

min.
min.
4076 4075 4074 4073 4072 4071 4070 4069 4068 4067 4066 4065 4064
10 OCTOBER 1973
6.7 μm


min.
min.
4090 4089 4088 4087 4086 4085 4084 4083 4082 4081 4080 4079 4078 4077
11 OCTOBER 1973
11.5 μm

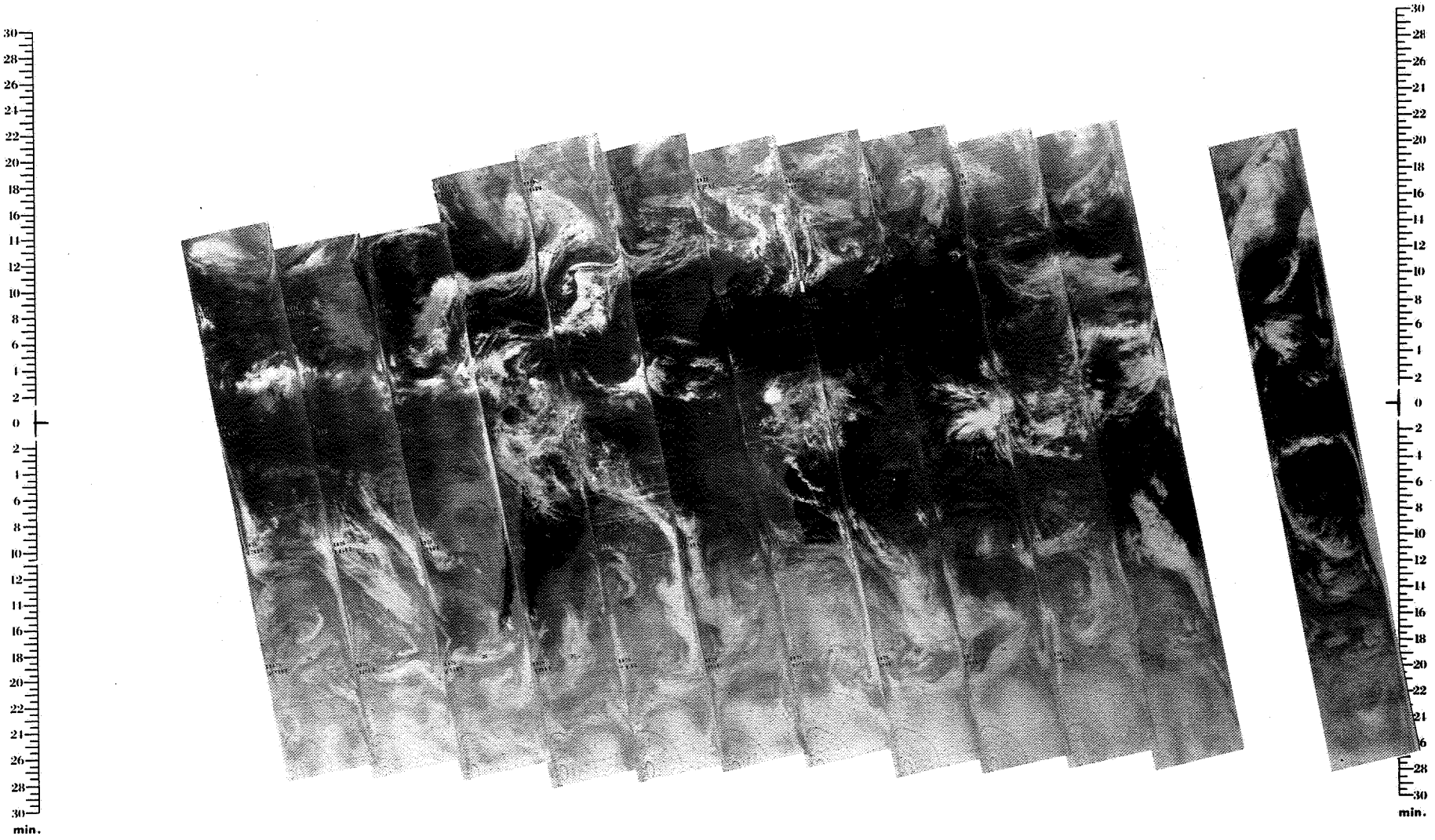

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4090 4089 4088 4087 4086 4085 4084 4083 4082 4081 4080 4079 4078 4077
11 OCTOBER 1973
6.7 μm


4103 4102 4101 4100 4099 4098 4097 4096 4095 4094 4093 4092 4091
12 OCTOBER 1973
11.5 μm
min.
min.


min.
min.
4103 4102 4101 4100 4099 4098 4097 4096 4095 4094 4093 4092 4091
12 OCTOBER 1973
6.7 μm

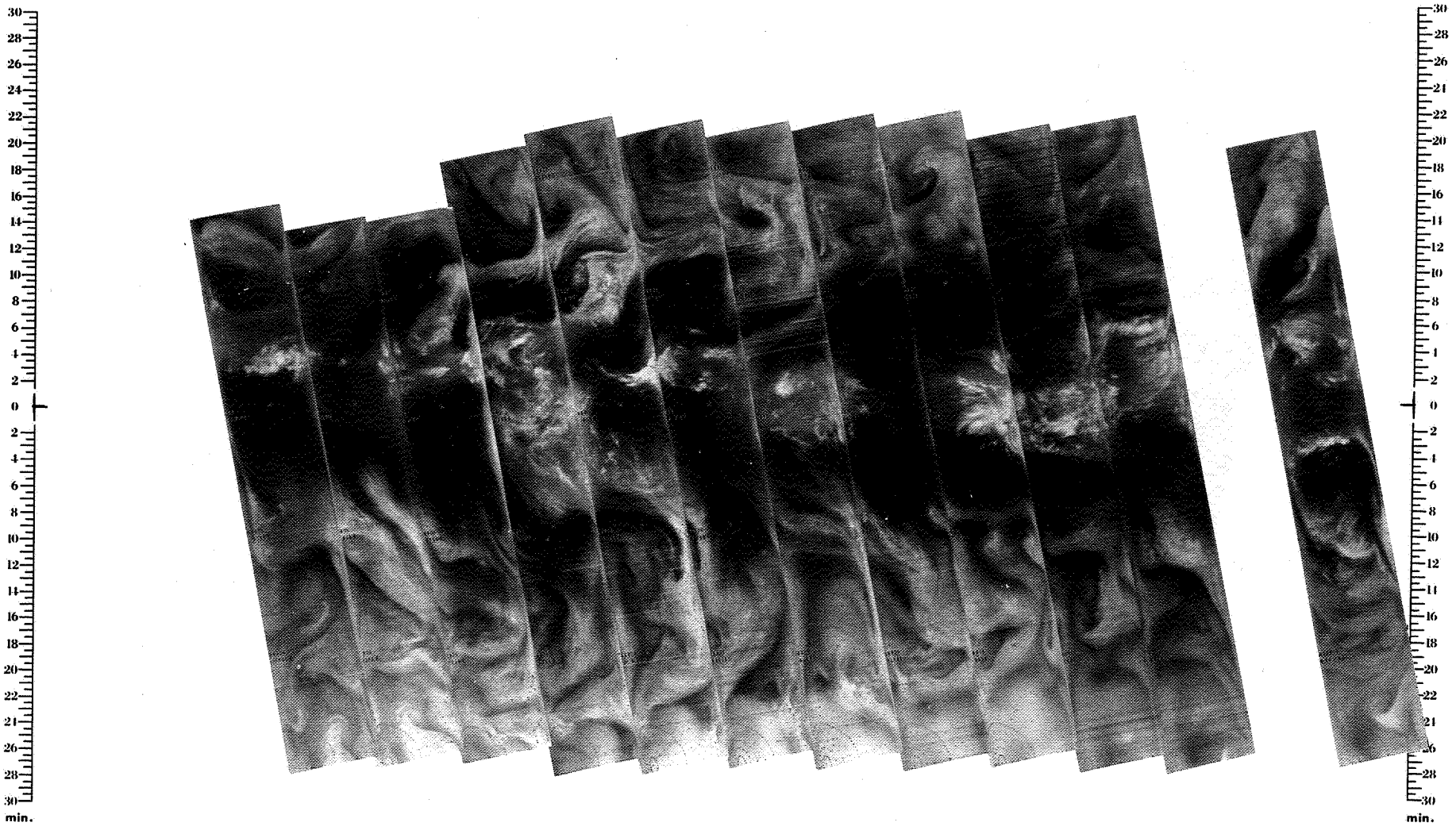

4116 4115 4114 4113 4112 4111 4110 4109 4108 4107 4106 4105 4104
13 OCTOBER 1973
11.5 μm
min.
min.

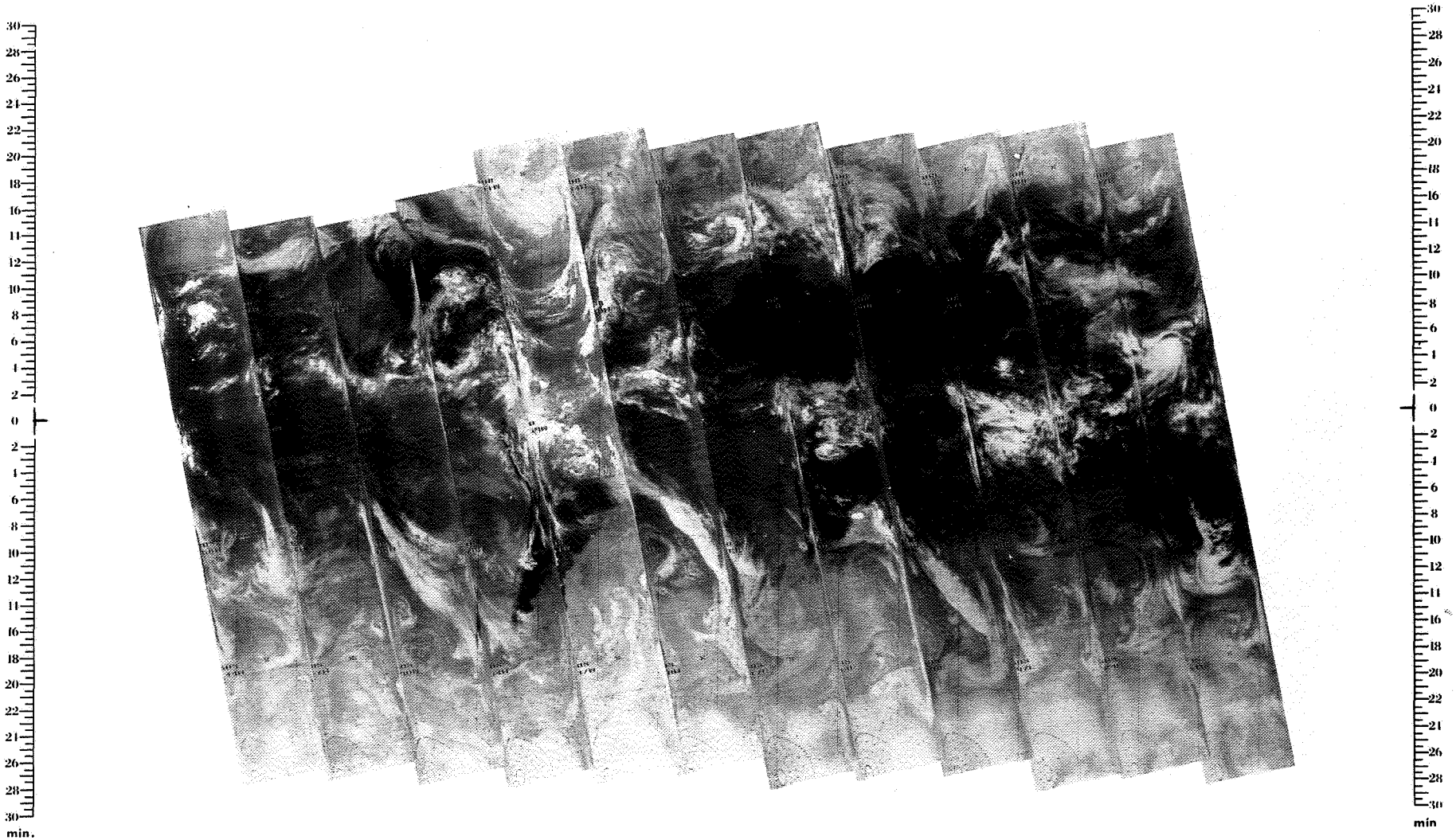
4104
4105
4106
4107
4108
4109
4110
4111
4112
4113
4114
4115
4116
13 OCTOBER 1973
6.7 μm

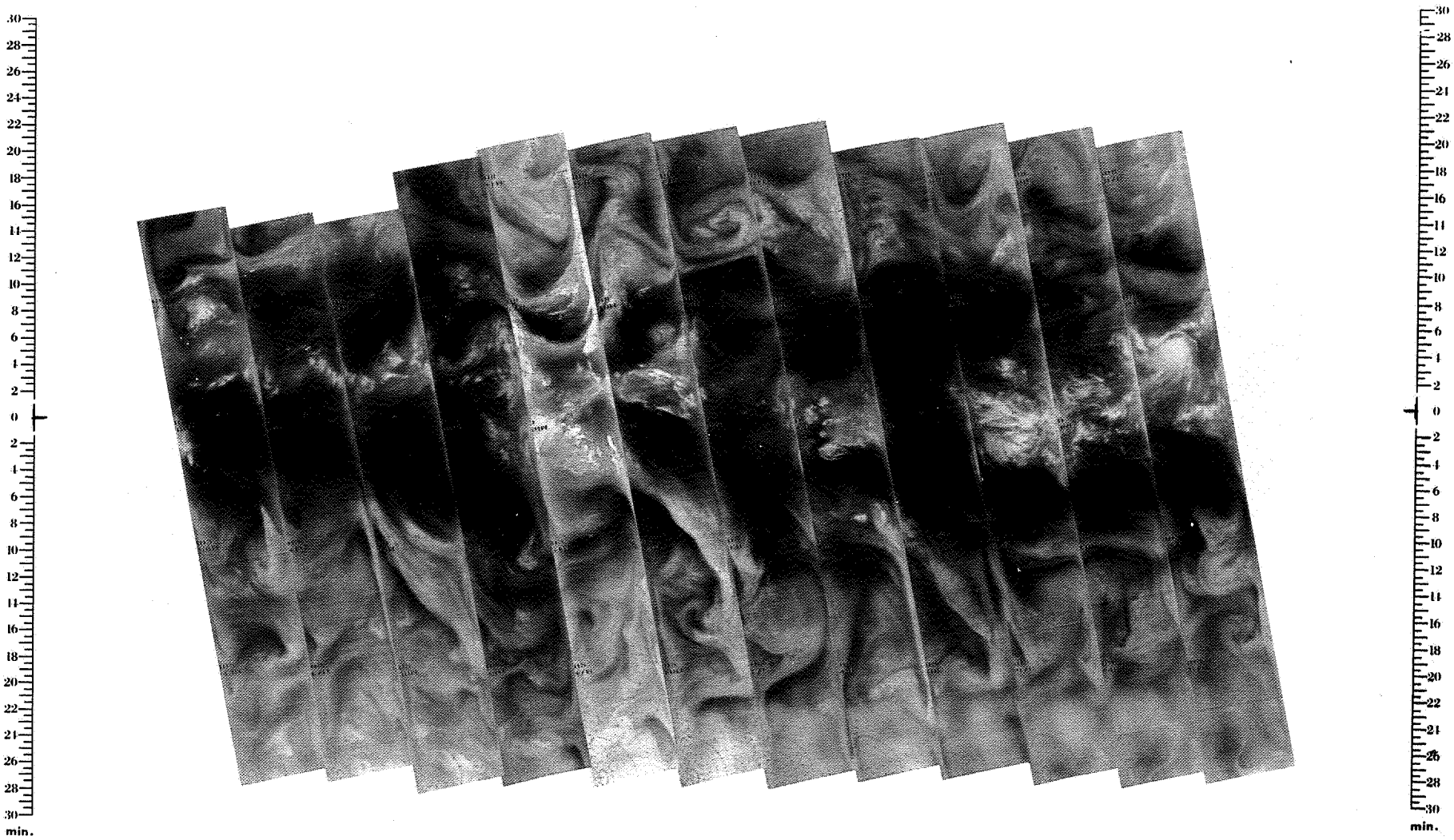


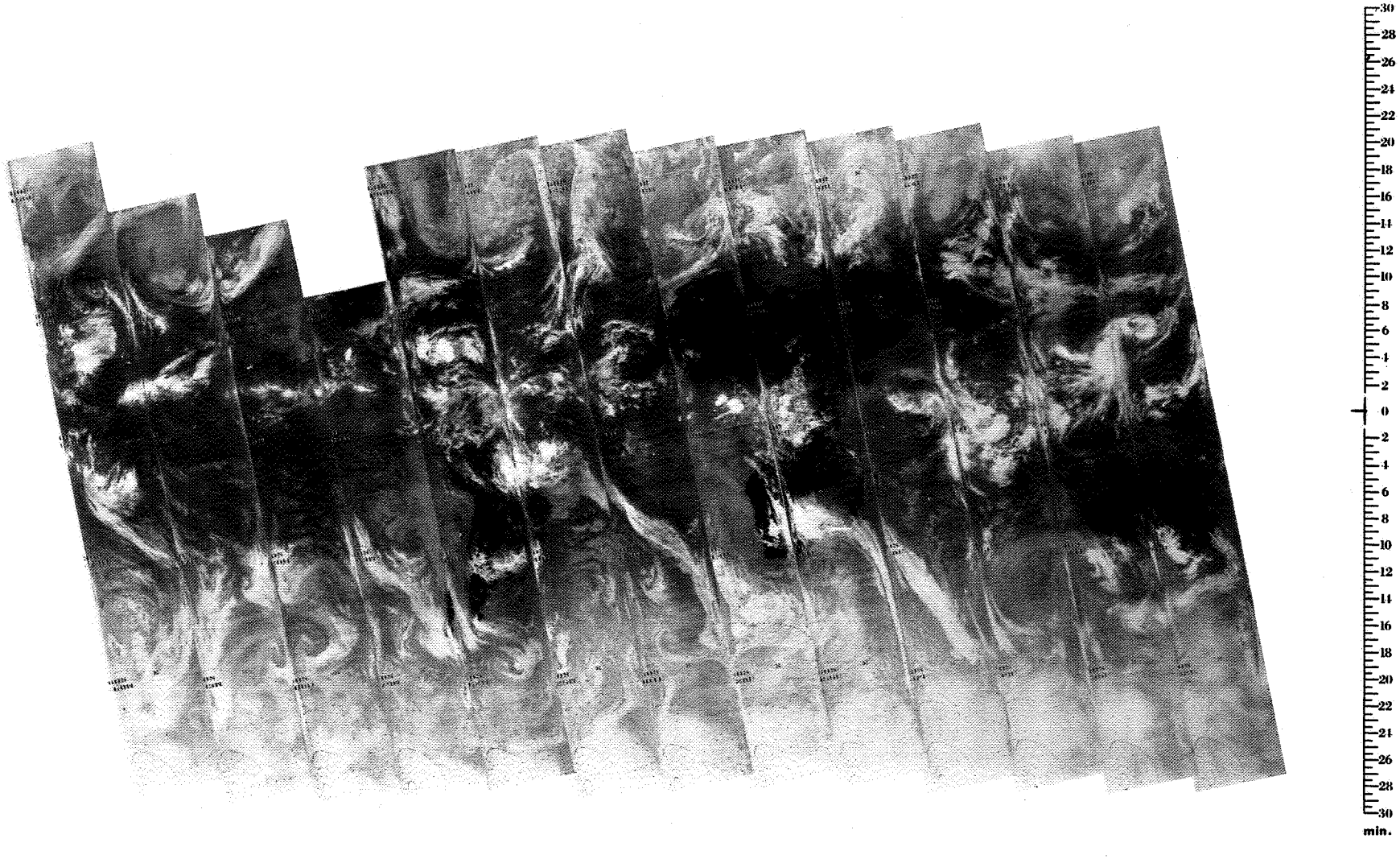
14 OCTOBER 1973

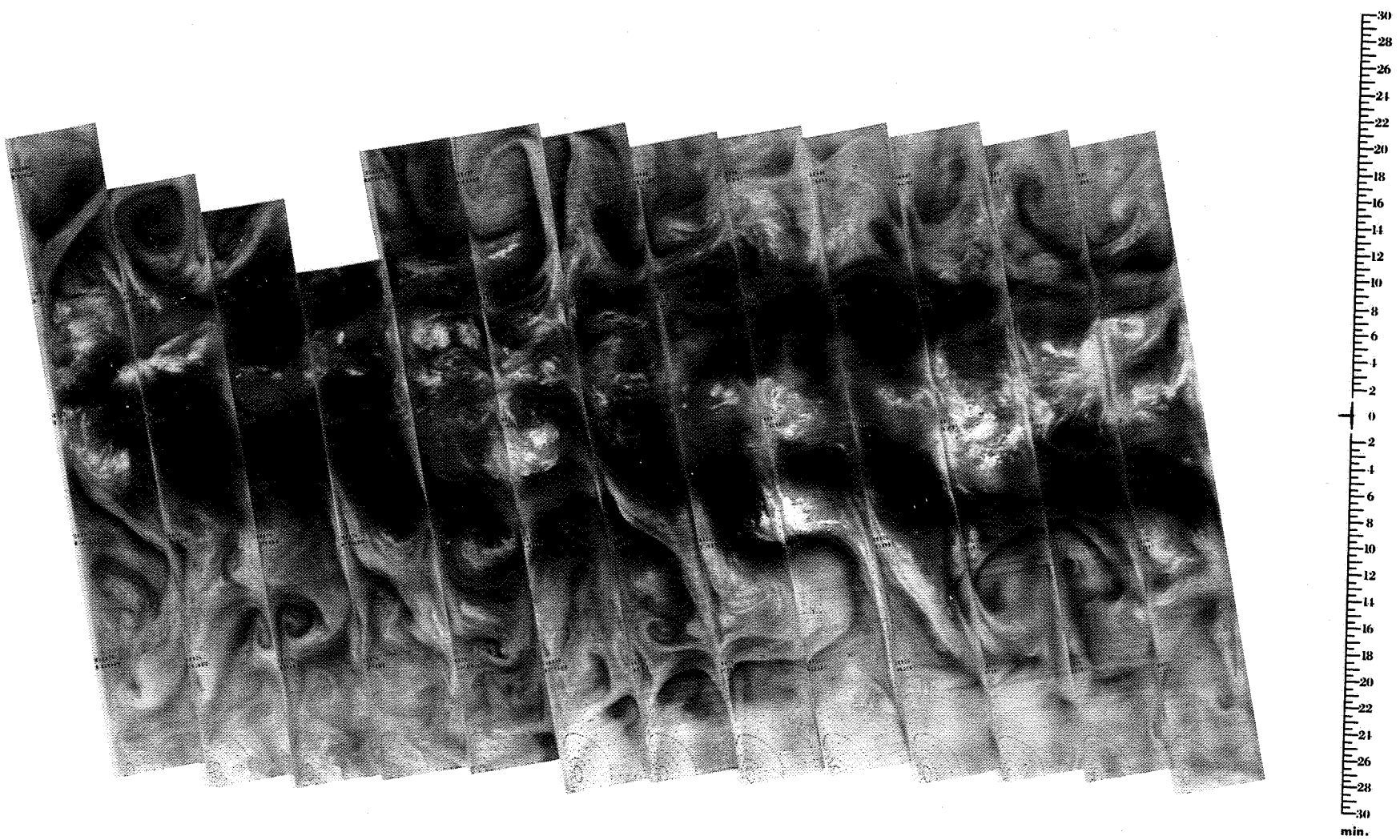
11.5 μm


min.
min.
4130 4129 4128 4127 4126 4125 4124 4123 4122 4121 4120 4119 4118 4117
14 OCTOBER 1973
6.7 μm


min.
min
4143 4142 4141 4140 4139 4138 4137 4136 4135 4134 4133 4132 4131
15 OCTOBER 1973
11.5 μm


4143
4142
4141
4140
4139
4138
4137
4136
4135
4134
4133
4132
4131
15 OCTOBER 1973
6.7 μm
min.
min.

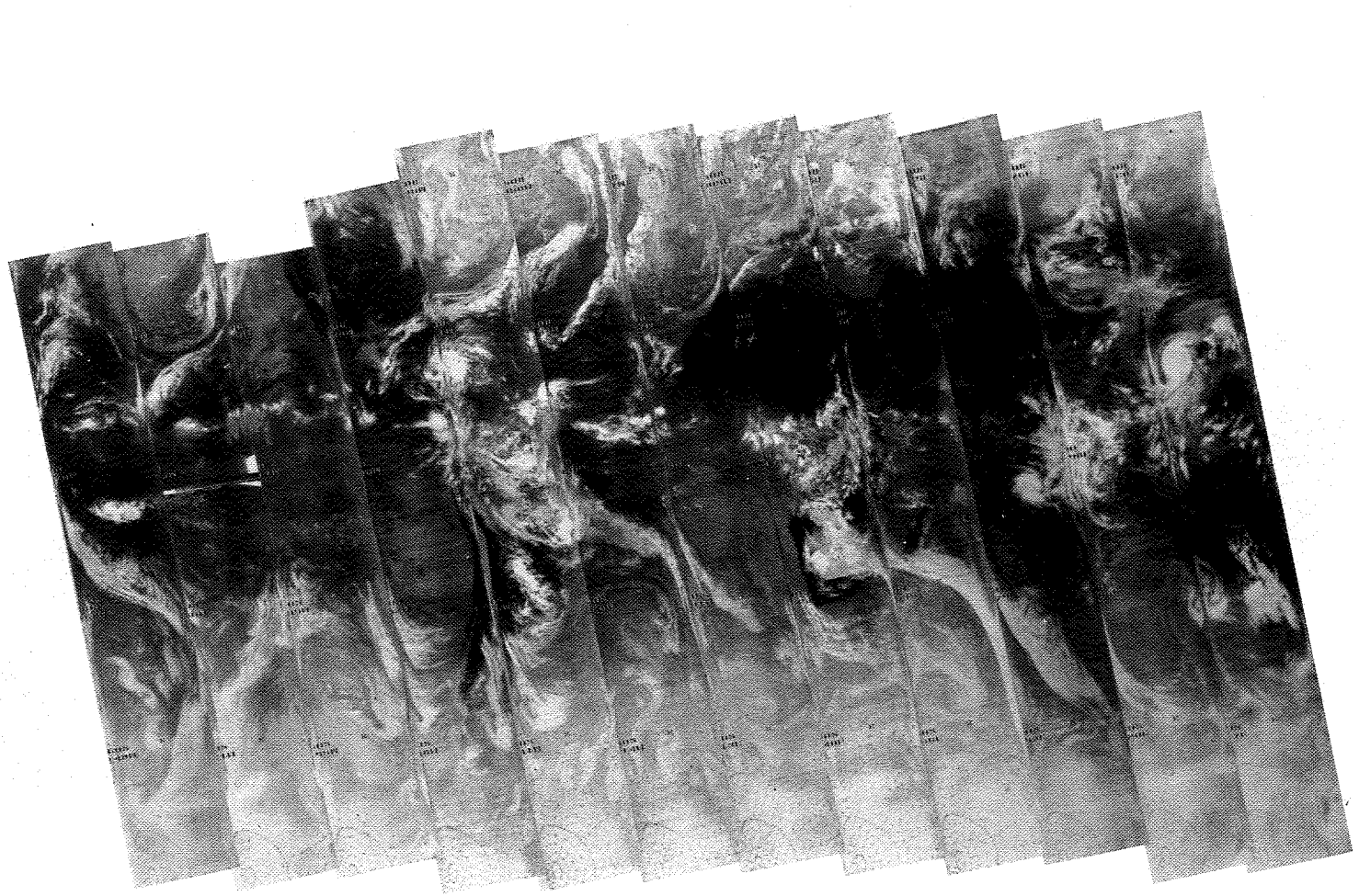

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4157 4156 4155 4154 4153 4152 4151 4150 4149 4148 4147 4146 4145 4144
16 OCTOBER 1973
11.5 μm

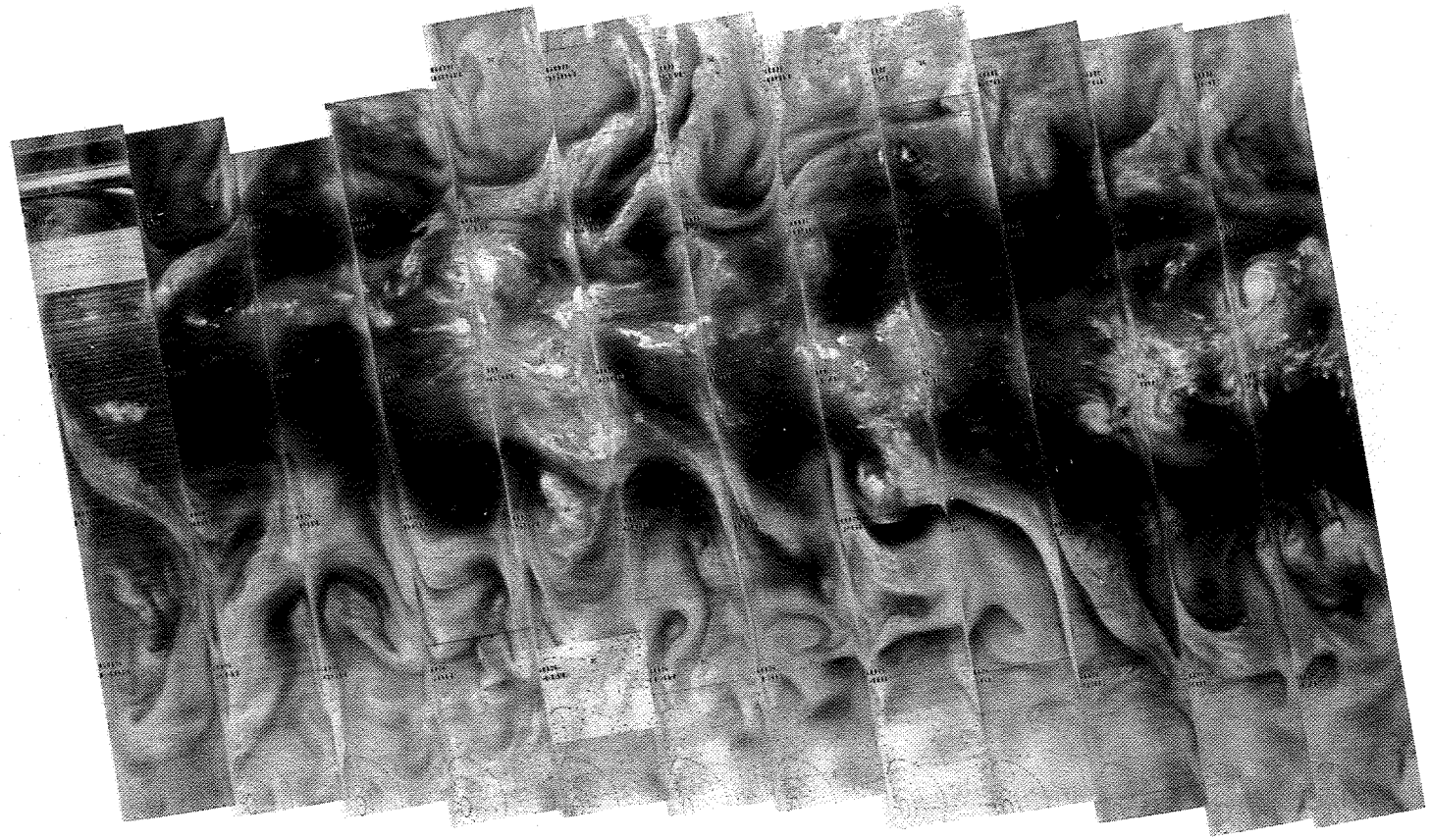


4157 4156 4155 4154 4153 4152 4151 4150 4149 4148 4147 4146 4145 4144

16 OCTOBER 1973

6.7 μm

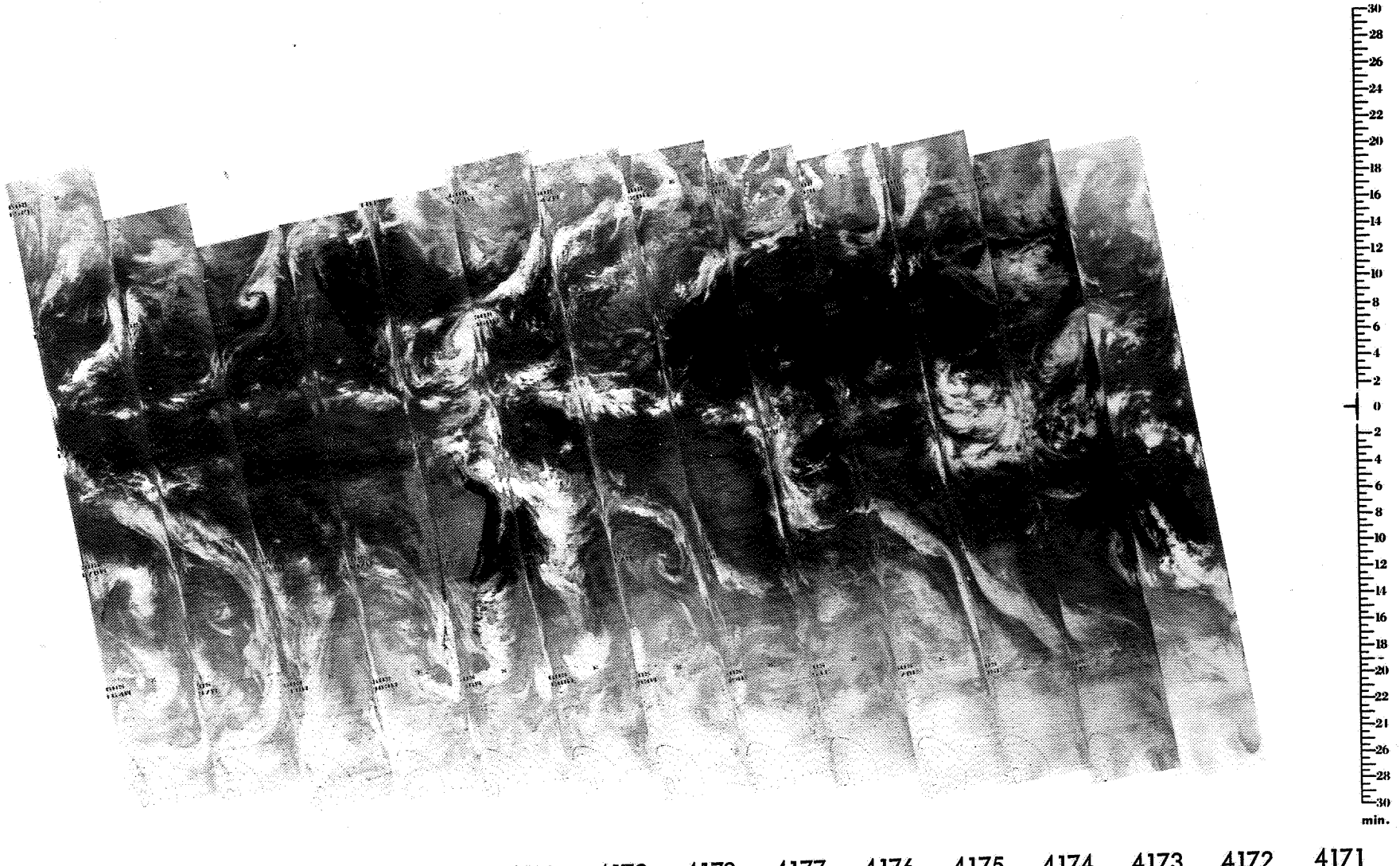

4170 4169 4168 4167 4166 4165 4164 4163 4162 4161 4160 4159 4158
17 OCTOBER 1973
11.5 μm
min.
min.



4170 4169 4168 4167 4166 4165 4164 4163 4162 4161 4160 4159 4158

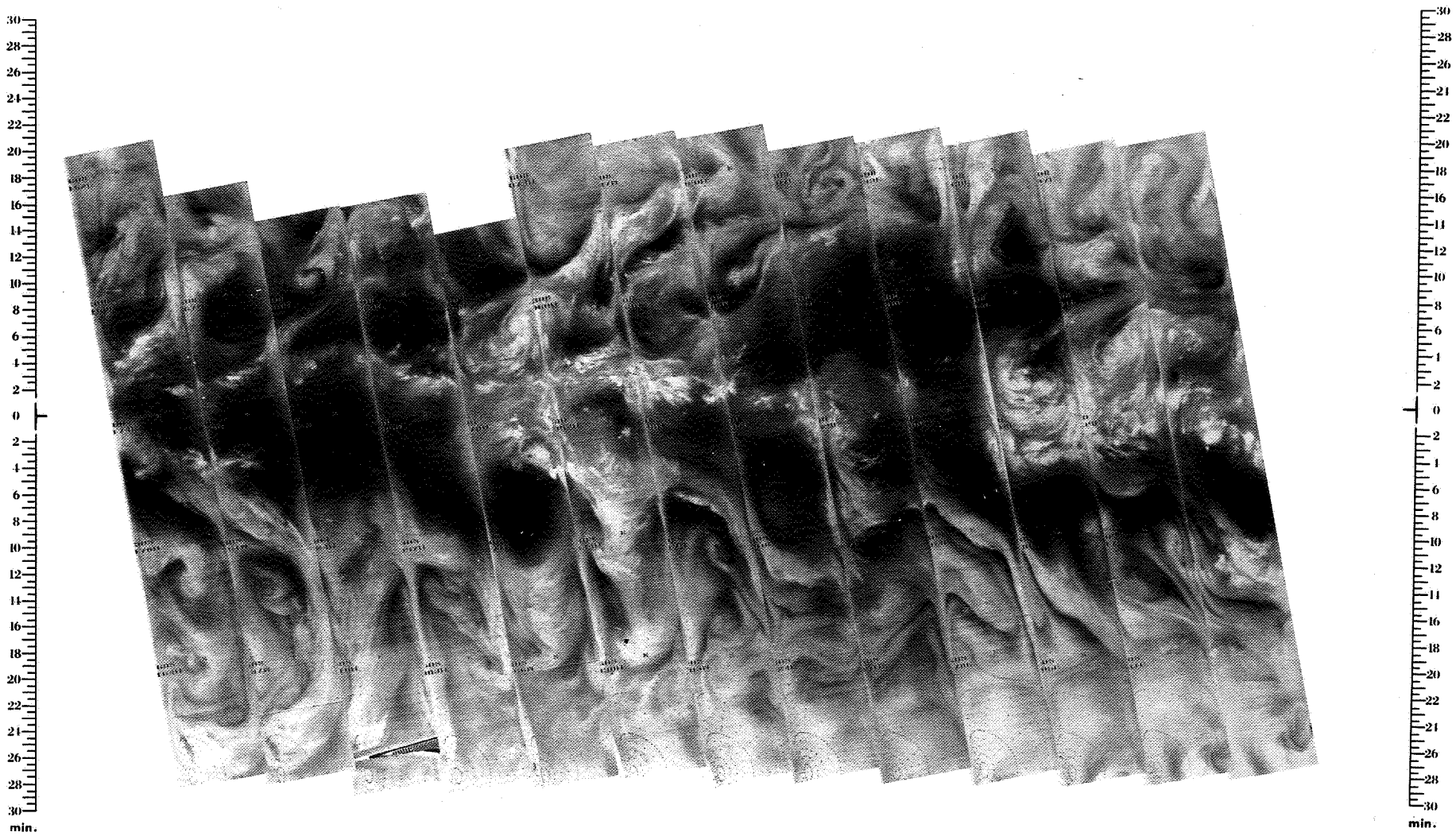
17 OCTOBER 1973

6.7 μm



18 OCTOBER 1973

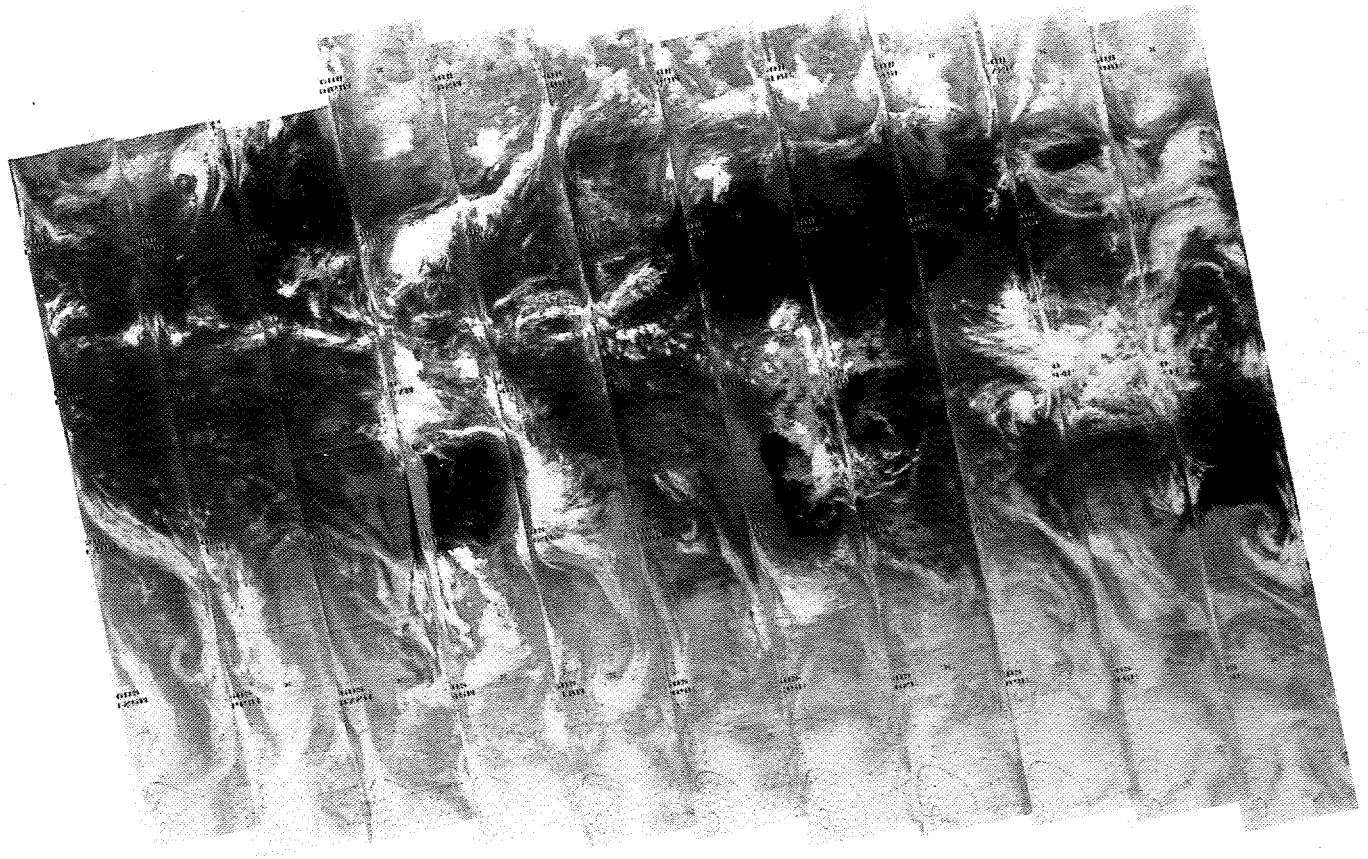
11.5 μm



4184 4183 4182 4181 4180 4179 4178 4177 4176 4175 4174 4173 4172 4171

18 OCTOBER 1973

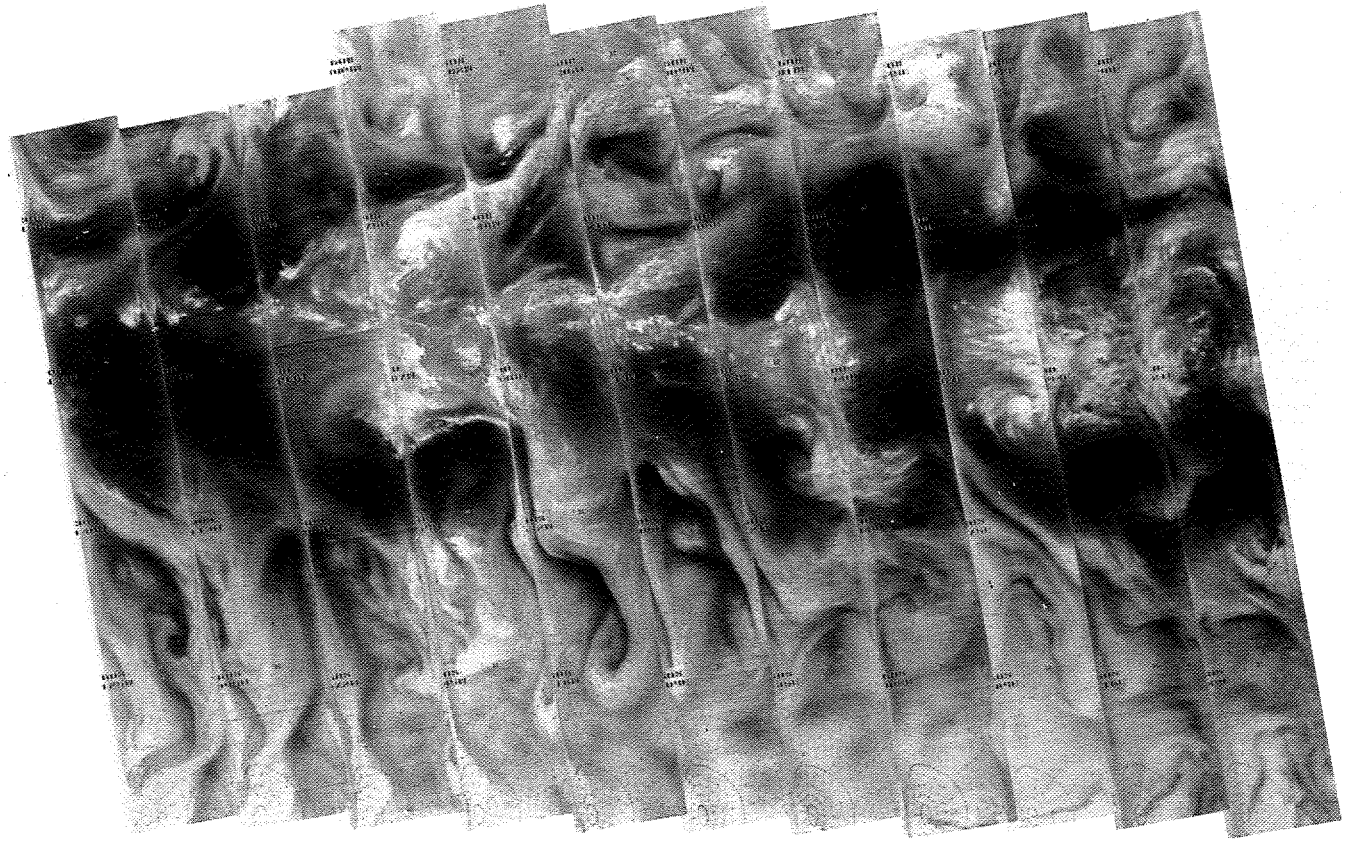
6.7 μm



4197 4196 4195 4194 4193 4192 4191 4190 4189 4188 4187 4186 4185

19 OCTOBER 1973

11.5 μm

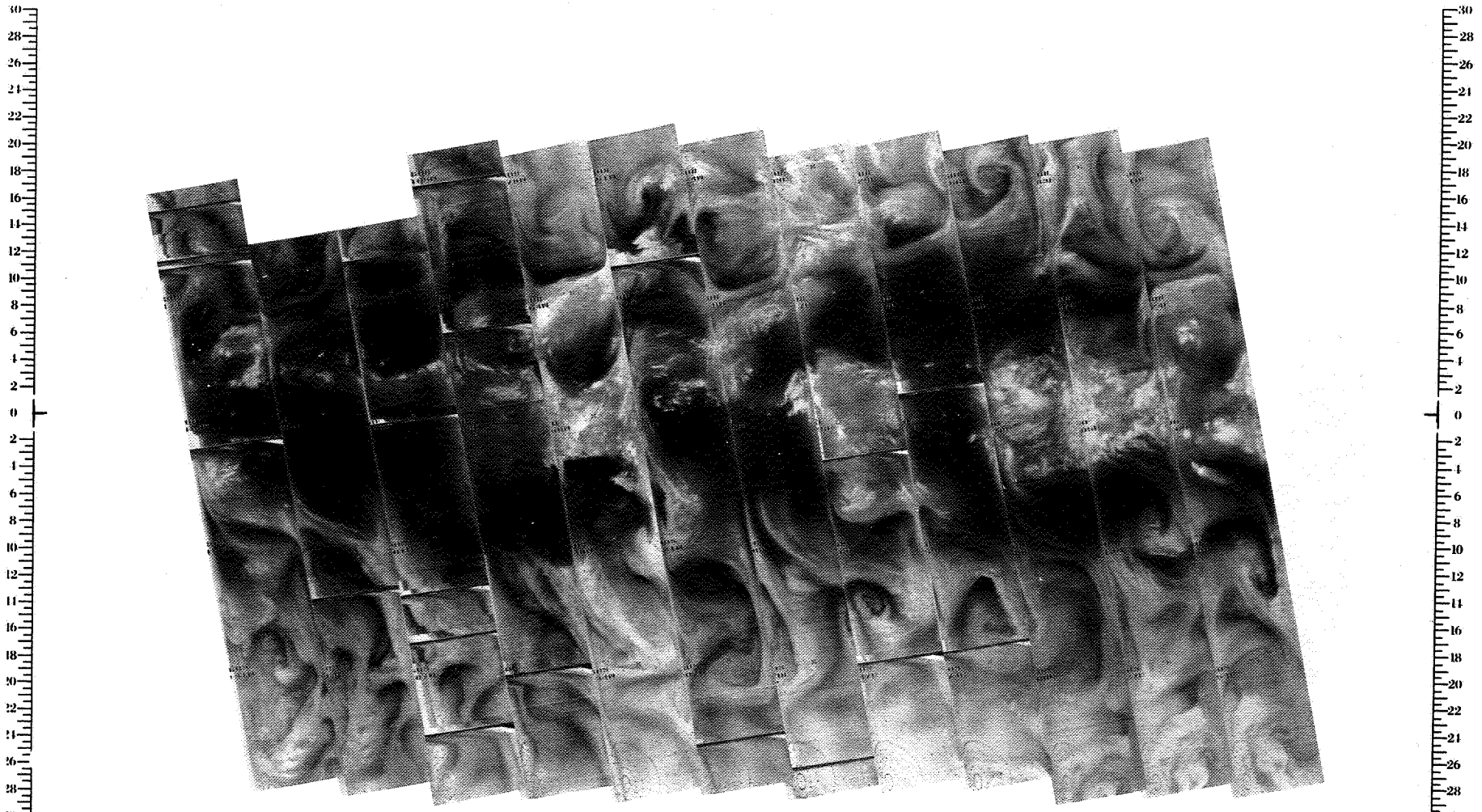


4197 4196 4195 4194 4193 4192 4191 4190 4189 4188 4187 4186 4185

19 OCTOBER 1973

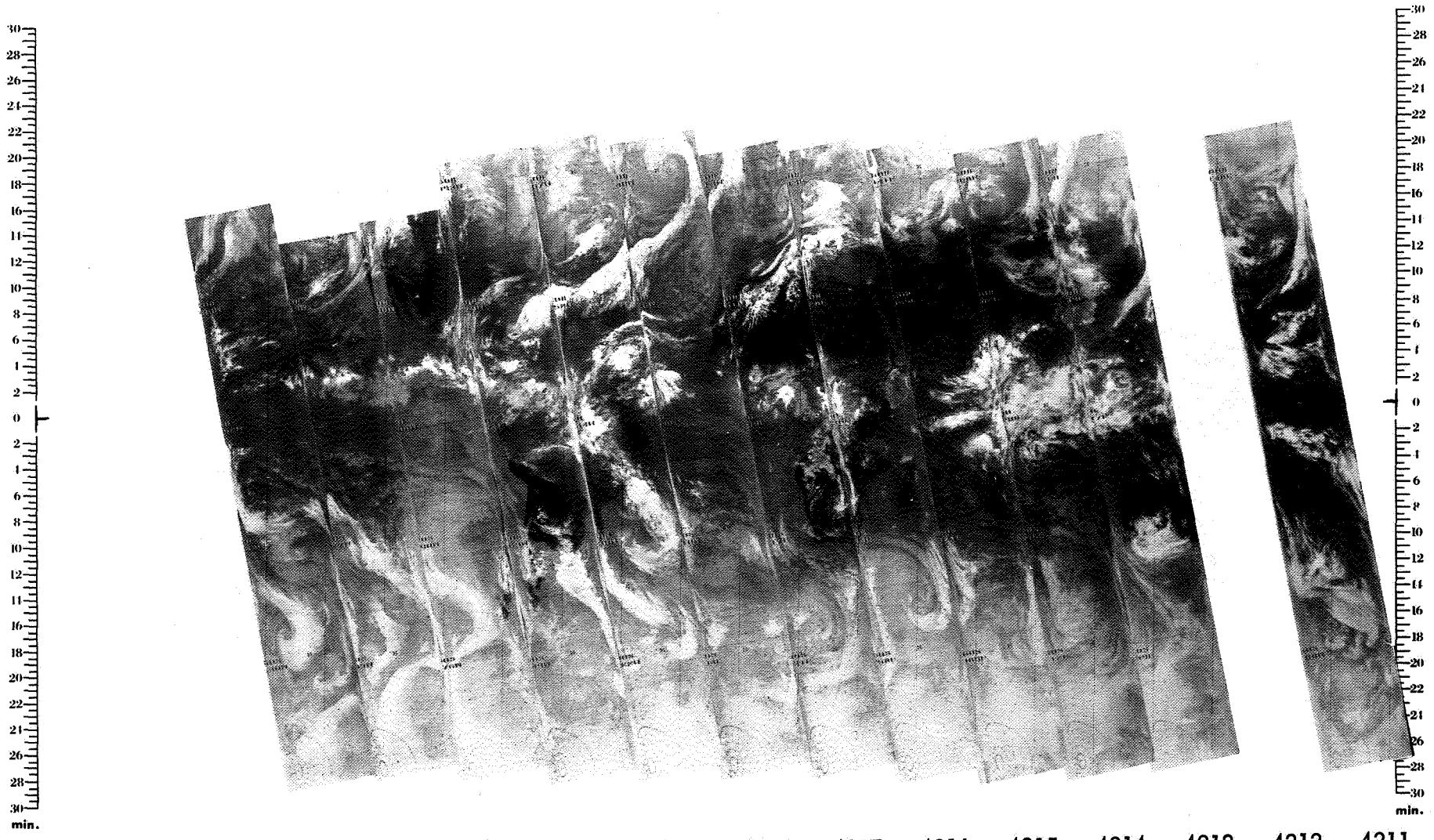
6.7 μm

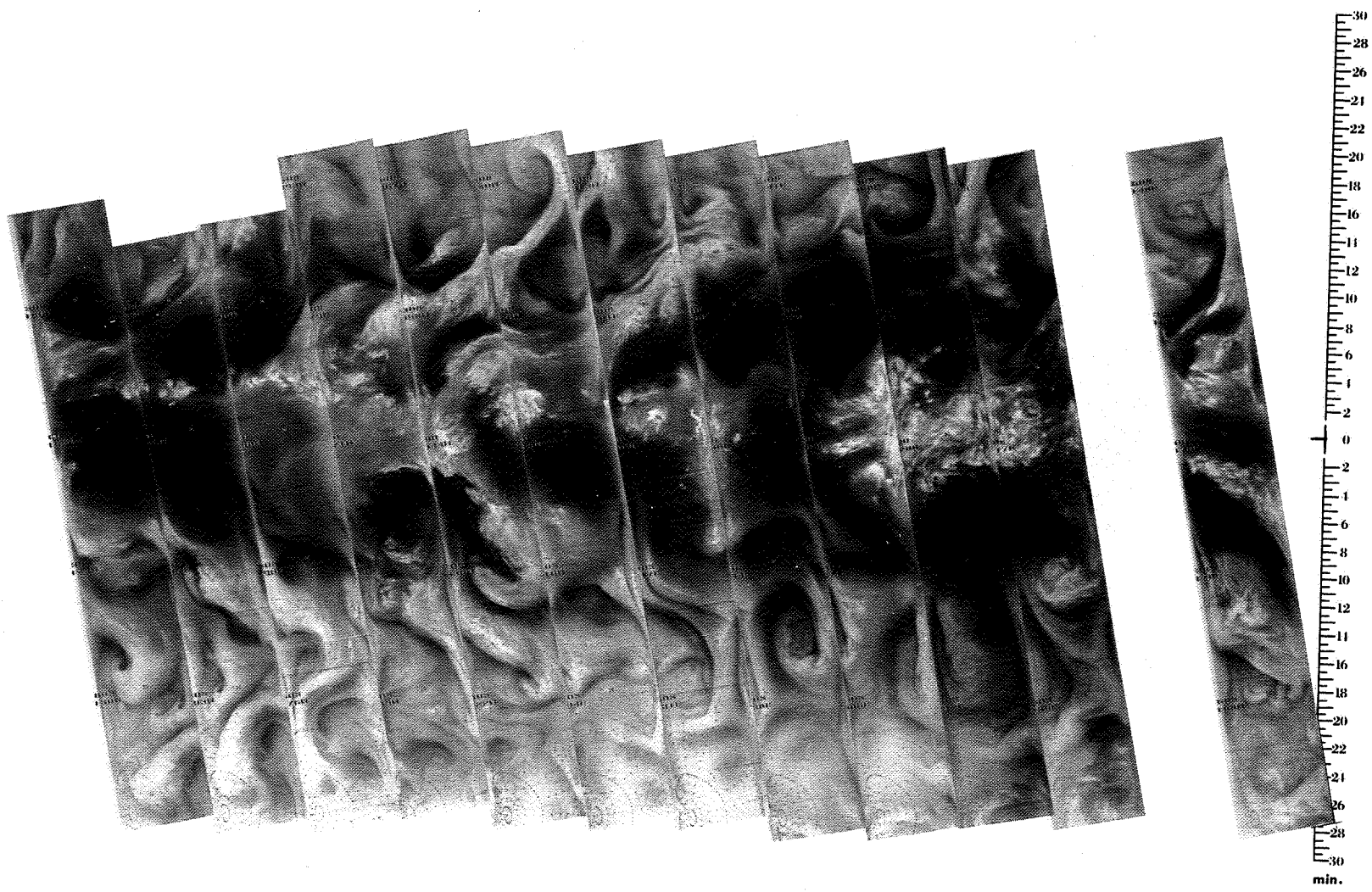
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 min.
4198 4199 4200 4201 4202 4203 4204 4205 4206 4207 4208 4209 4210
20 OCTOBER 1973
11.5 μm
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 min.

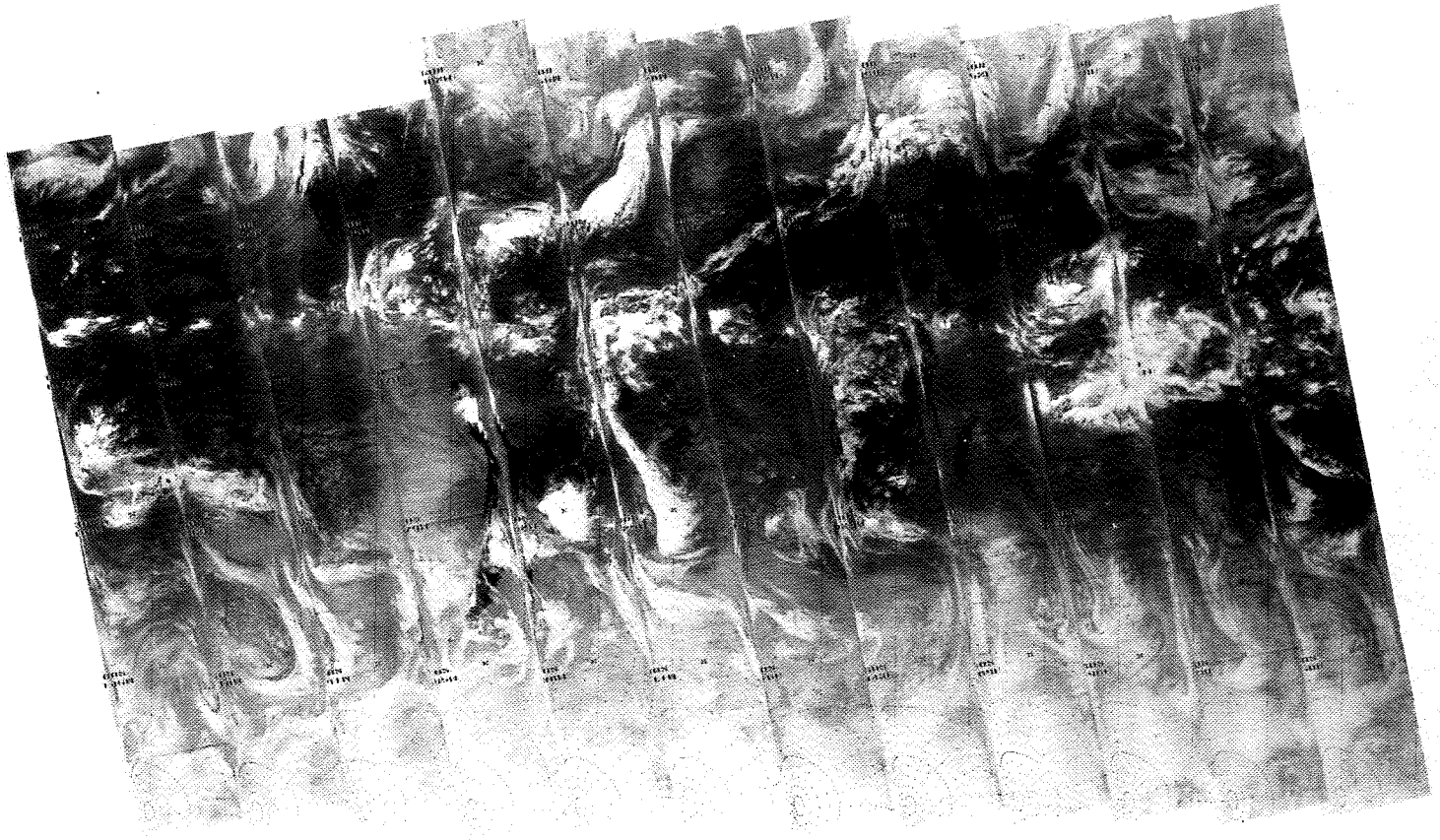


20 OCTOBER 1973

6.7 μm


min.
min.
4224 4223 4222 4221 4220 4219 4218 4217 4216 4215 4214 4213 4212 4211
21 OCTOBER 1973
11.5 μm

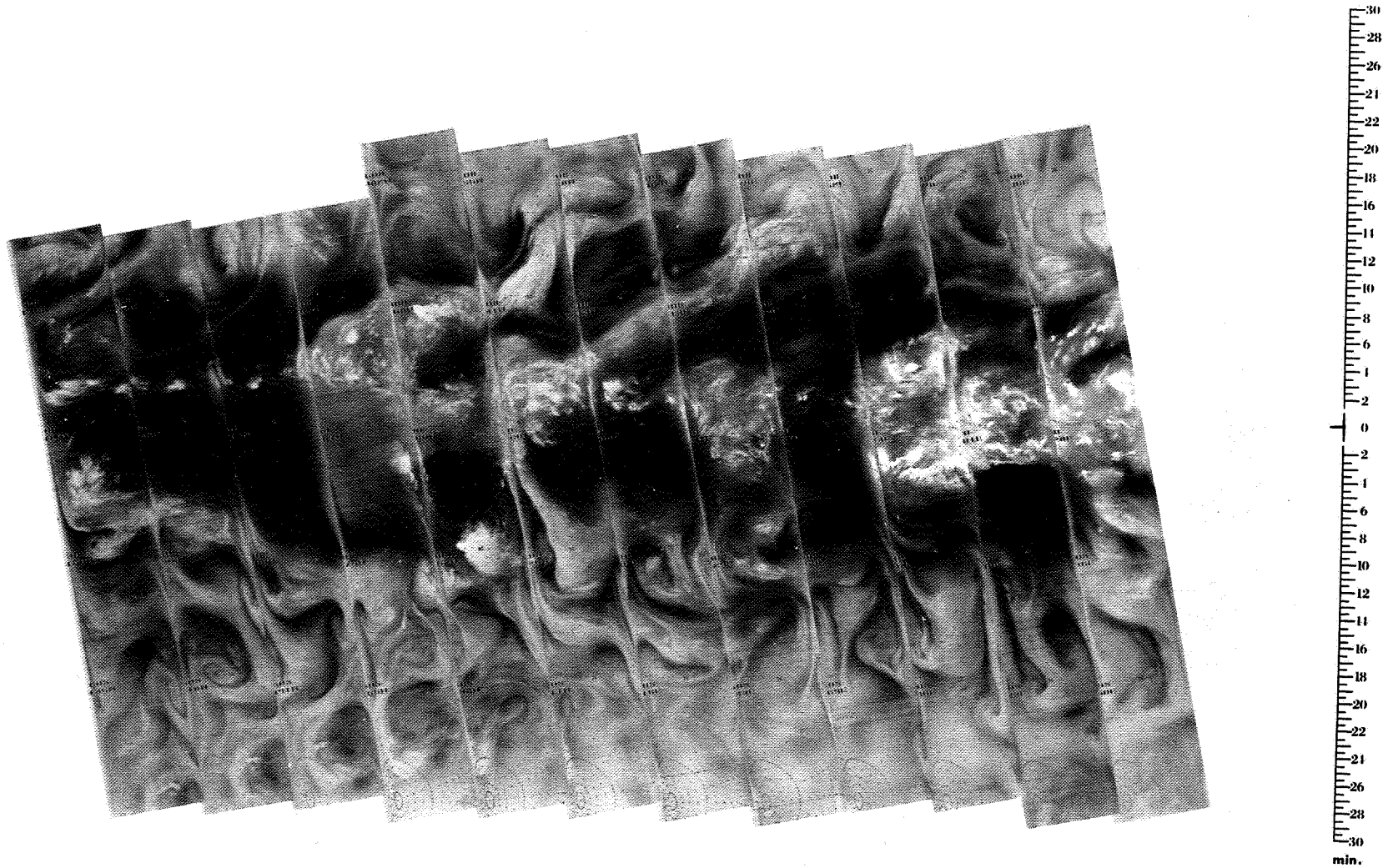

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4224 4223 4222 4221 4220 4219 4218 4217 4216 4215 4214 4213 4212 4211
21 OCTOBER 1973
6.7 μm

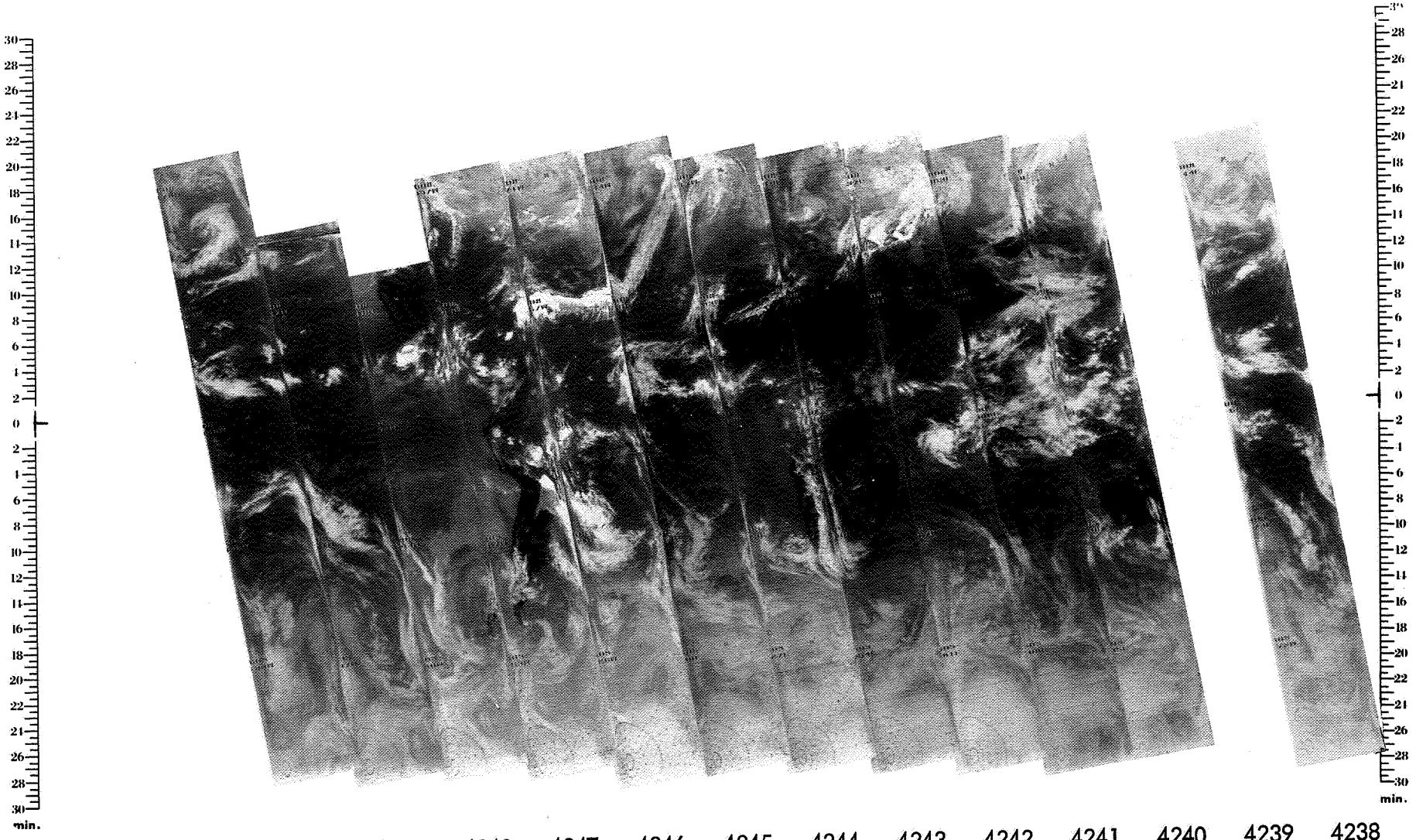


4237 4236 4235 4234 4233 4232 4231 4230 4229 4228 4227 4226 4225

22 OCTOBER 1973

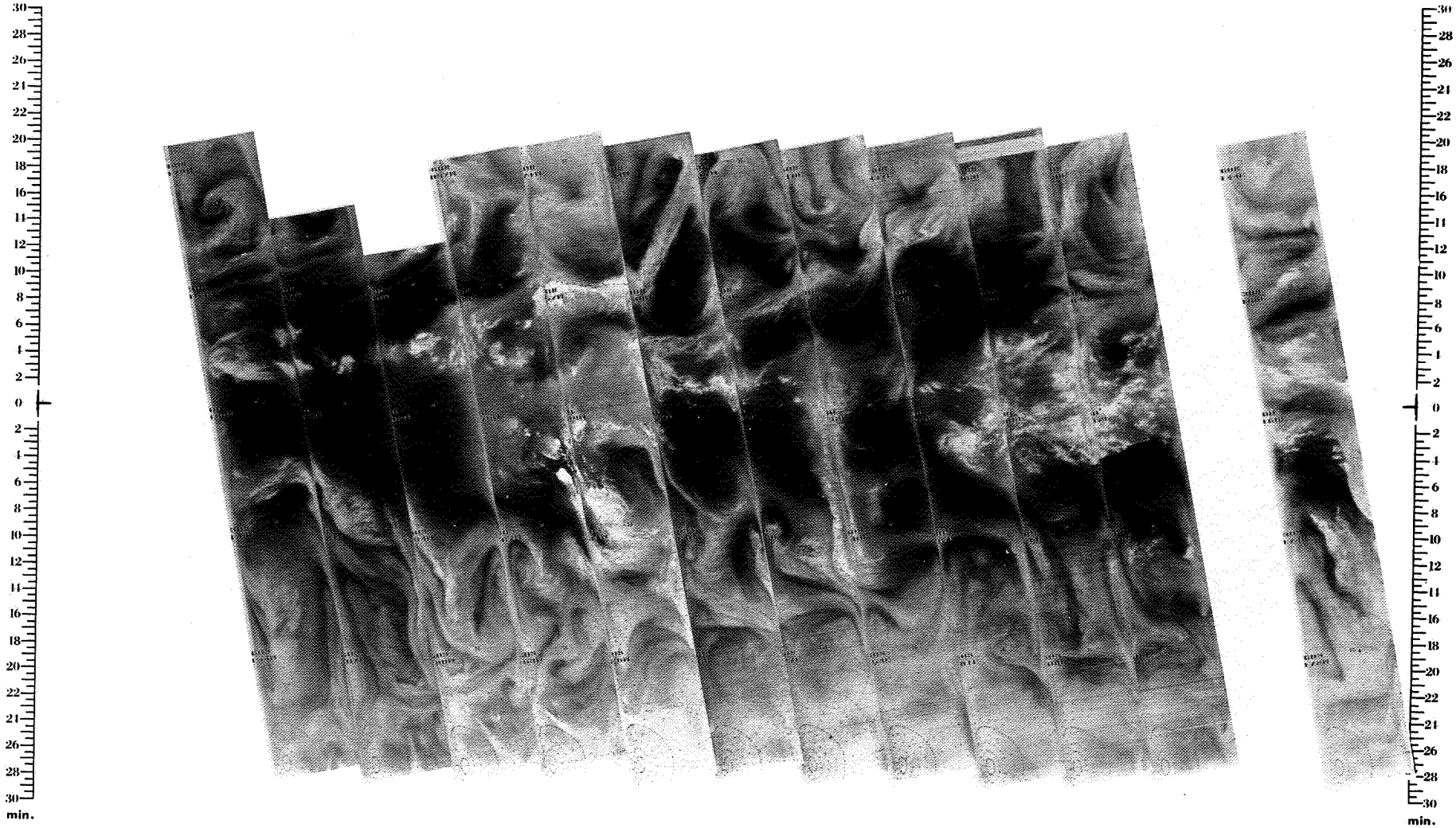
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4237 4236 4235 4234 4233 4232 4231 4230 4229 4228 4227 4226 4225
22 OCTOBER 1973
6.7 μm



23 OCTOBER 1973

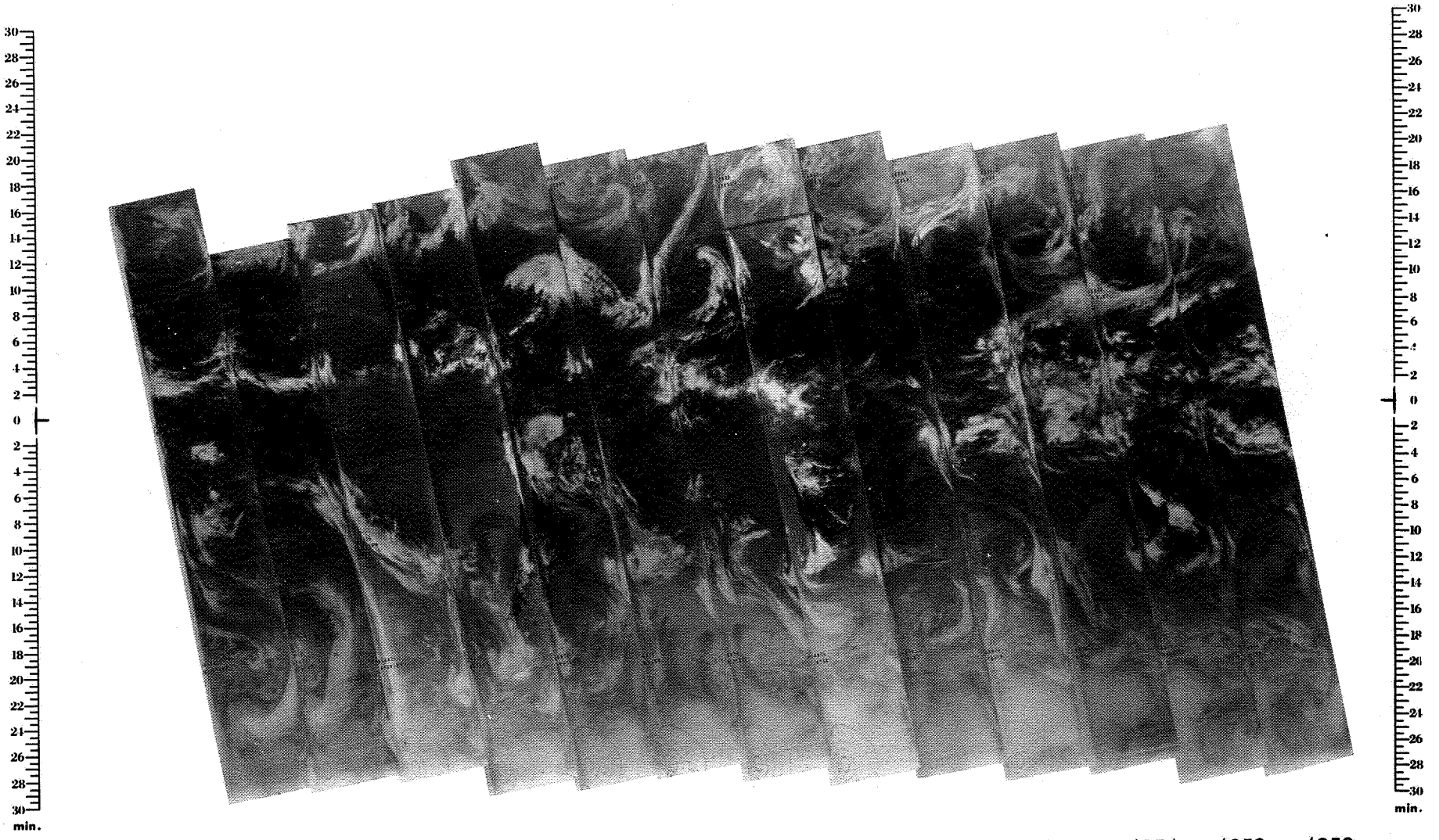
11.5 μm



4251 4250 4249 4248 4247 4246 4245 4244 4243 4242 4241 4240 4239 4238

23 OCTOBER 1973

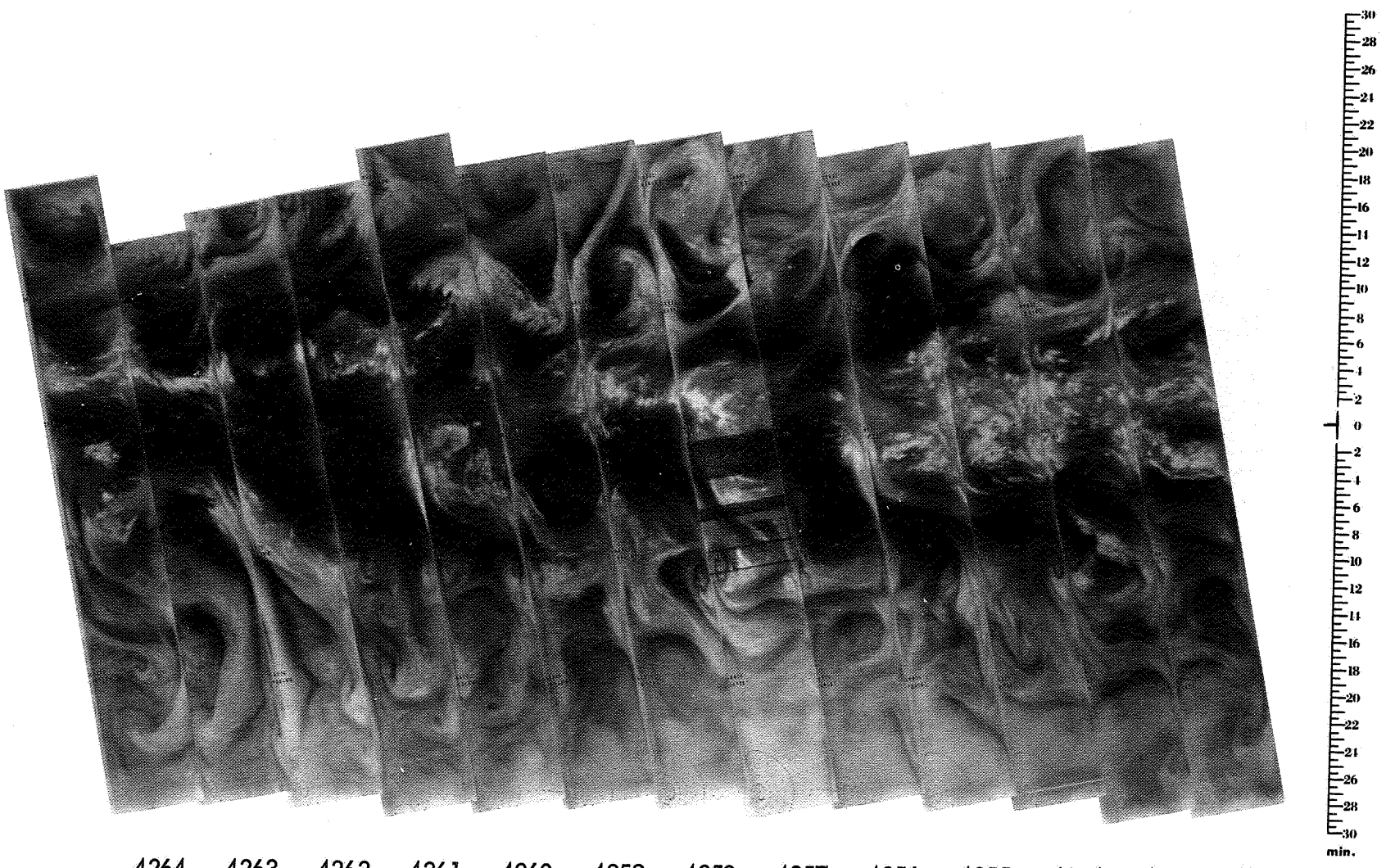
6.7 μm



4264 4263 4262 4261 4260 4259 4258 4257 4256 4255 4254 4253 4252

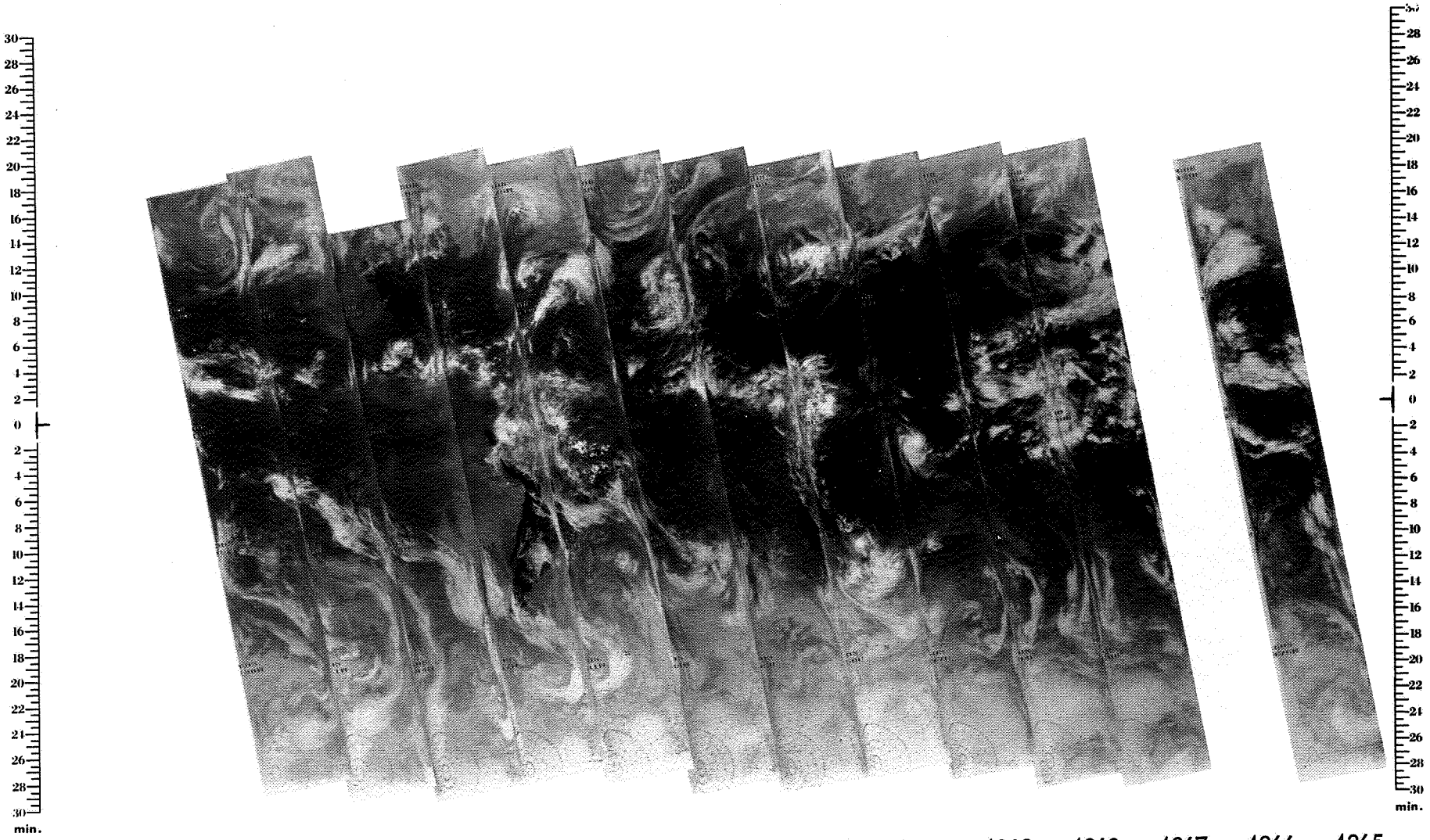
24 OCTOBER 1973

11.5 μm



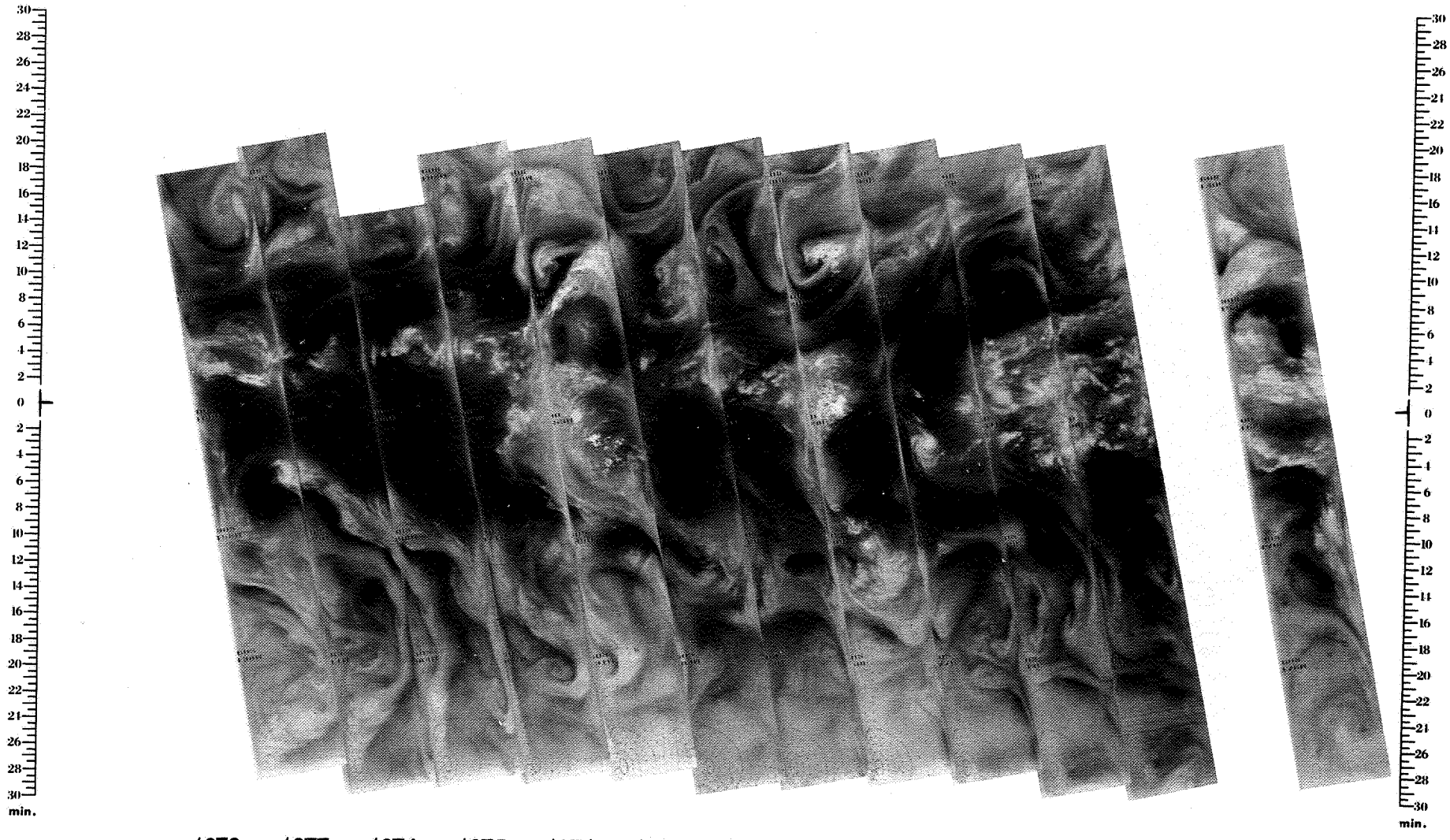
24 OCTOBER 1973

6.7 μm



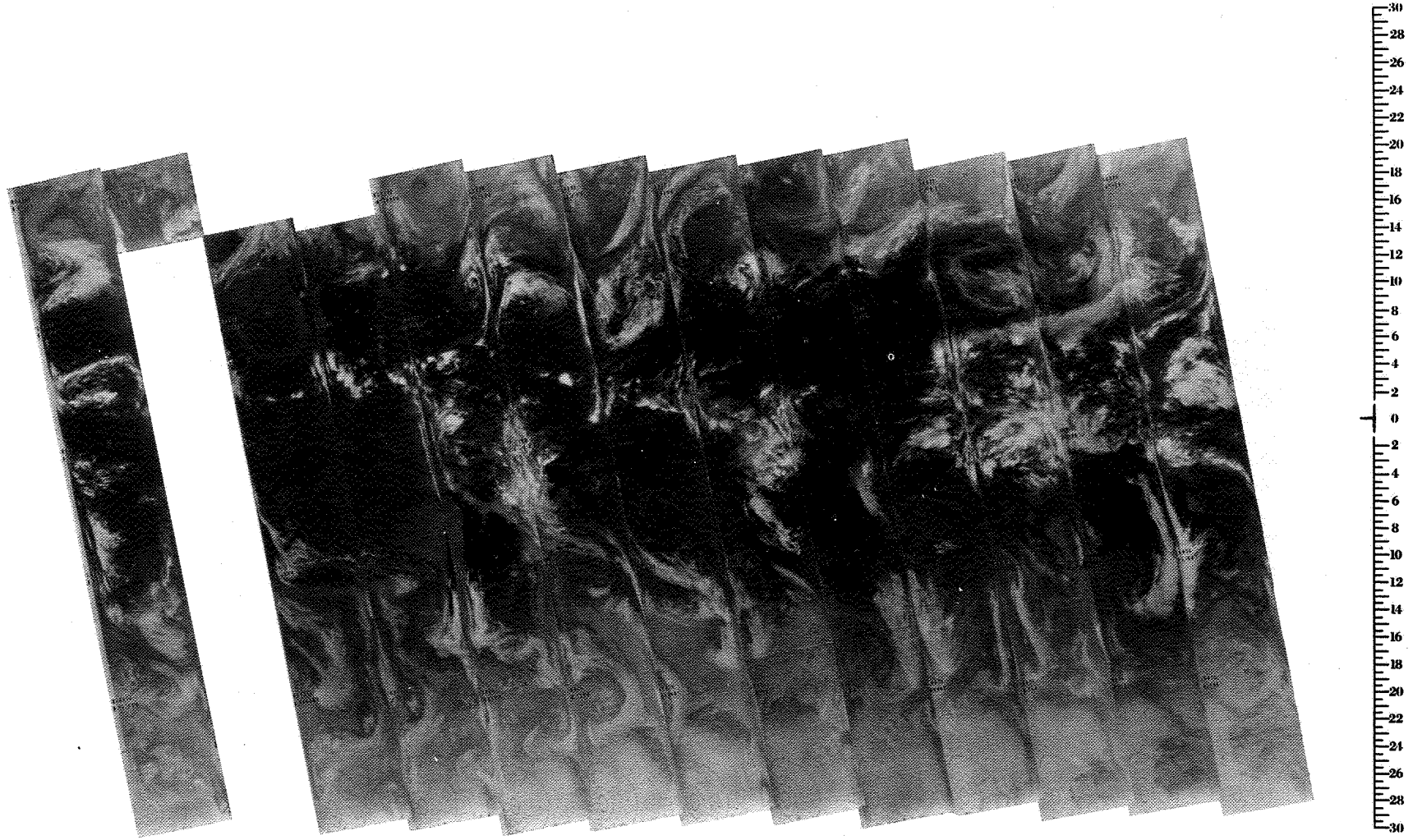
25 OCTOBER 1973

11.5 μm



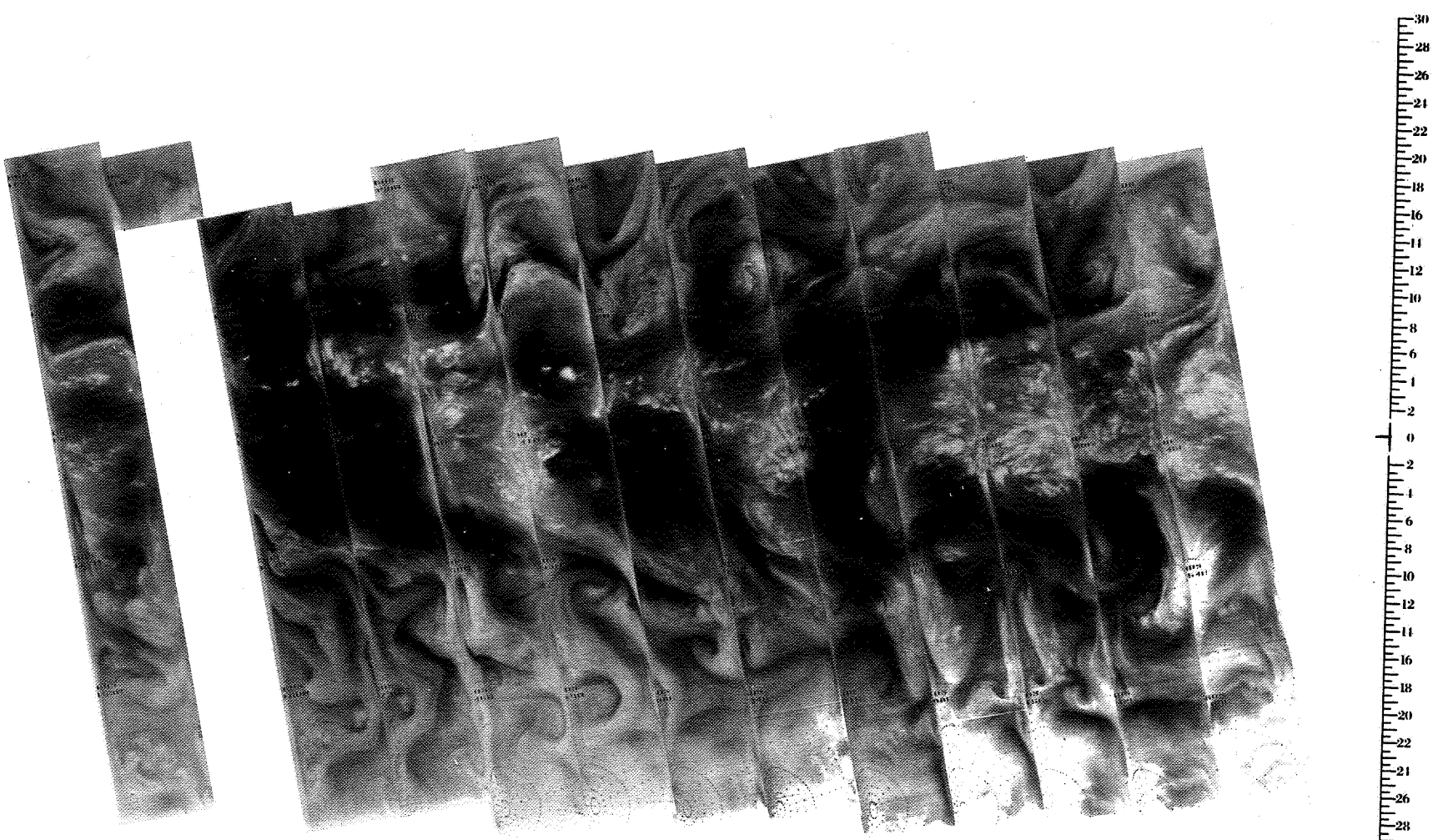
25 OCTOBER 1973

6.7 μm



26 OCTOBER 1973

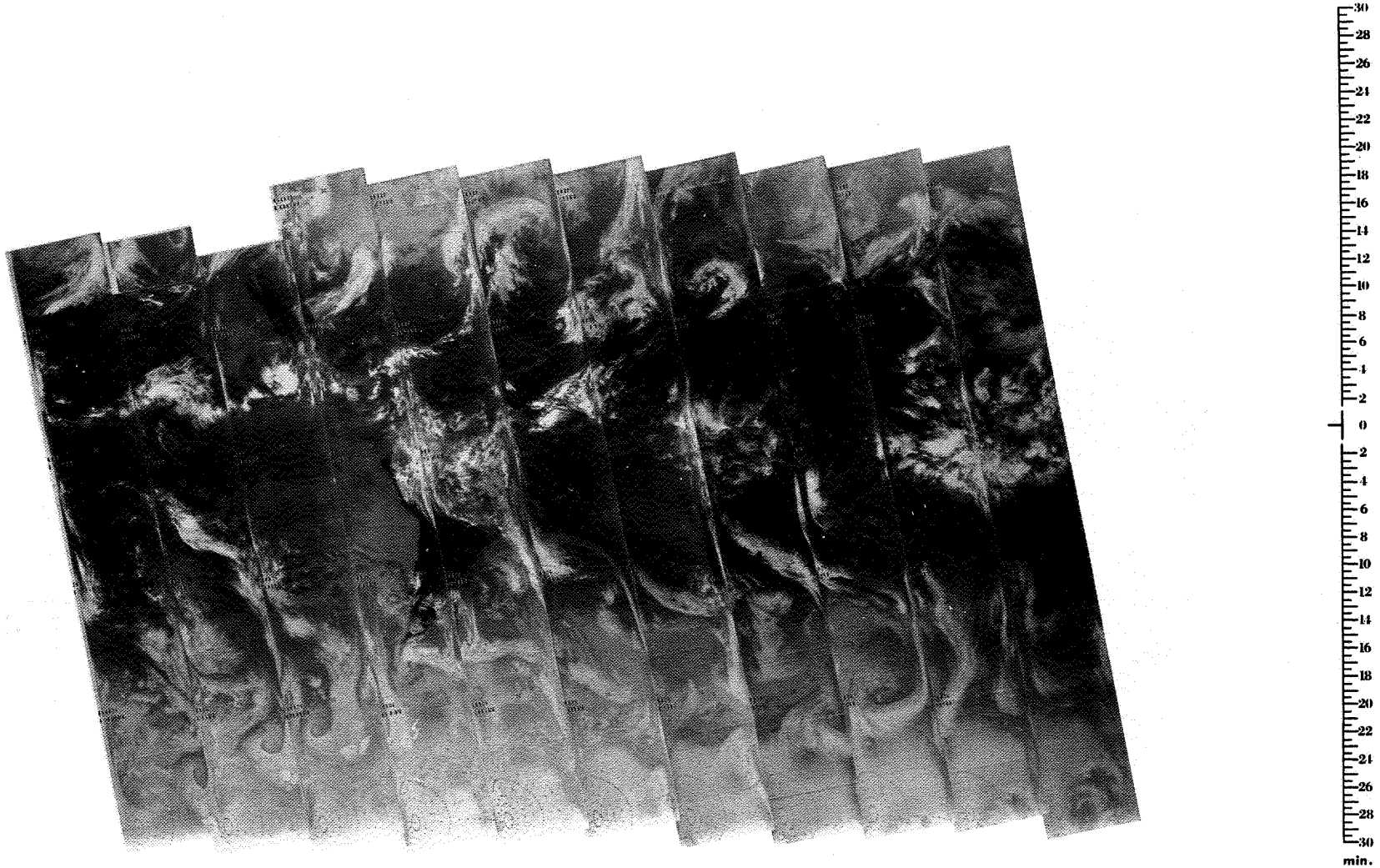
11.5 μm



4291 4290 4289 4288 4287 4286 4285 4284 4283 4282 4281 4280 4279

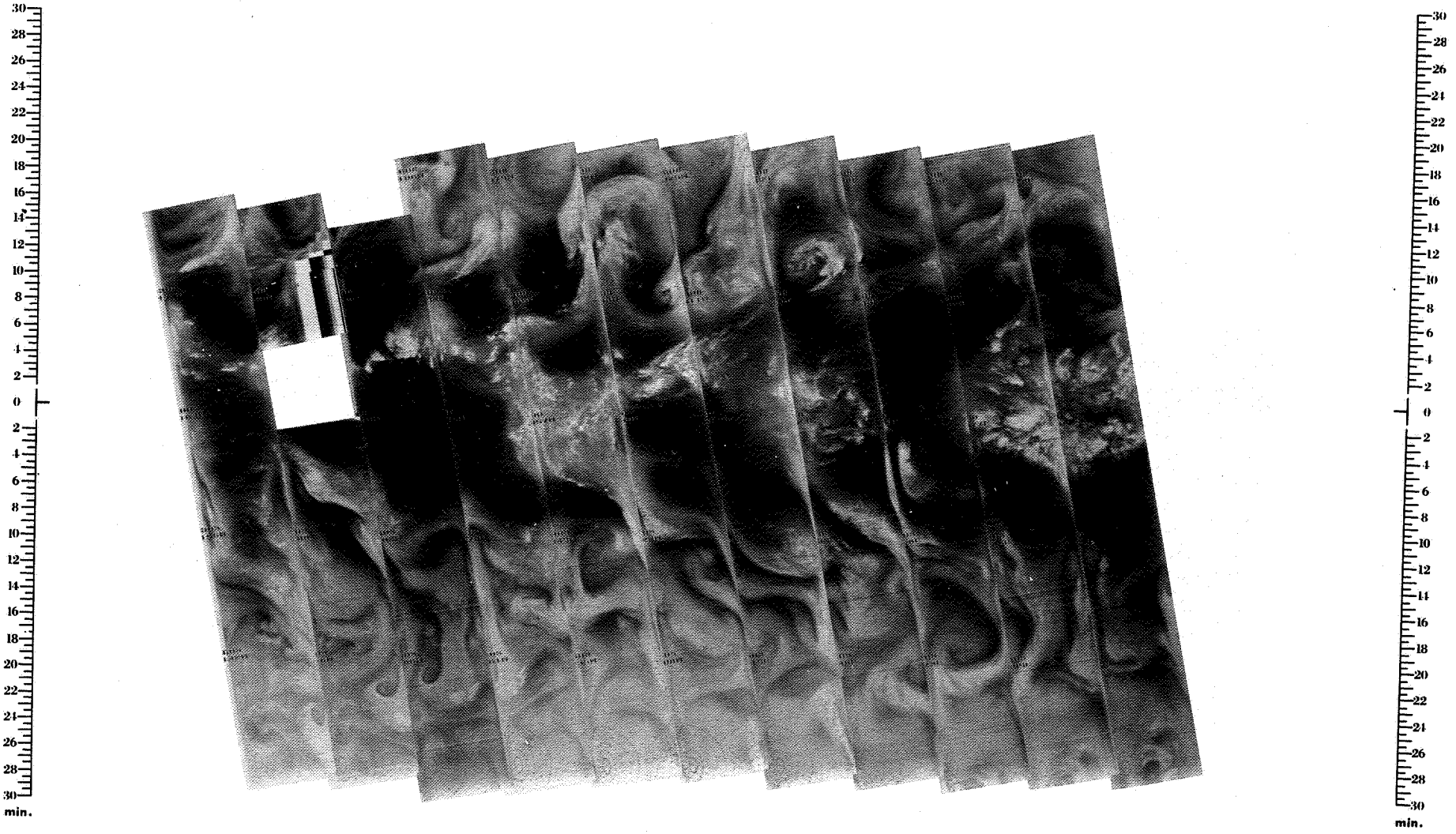
26 OCTOBER 1973

6.7 μm



27 OCTOBER 1973

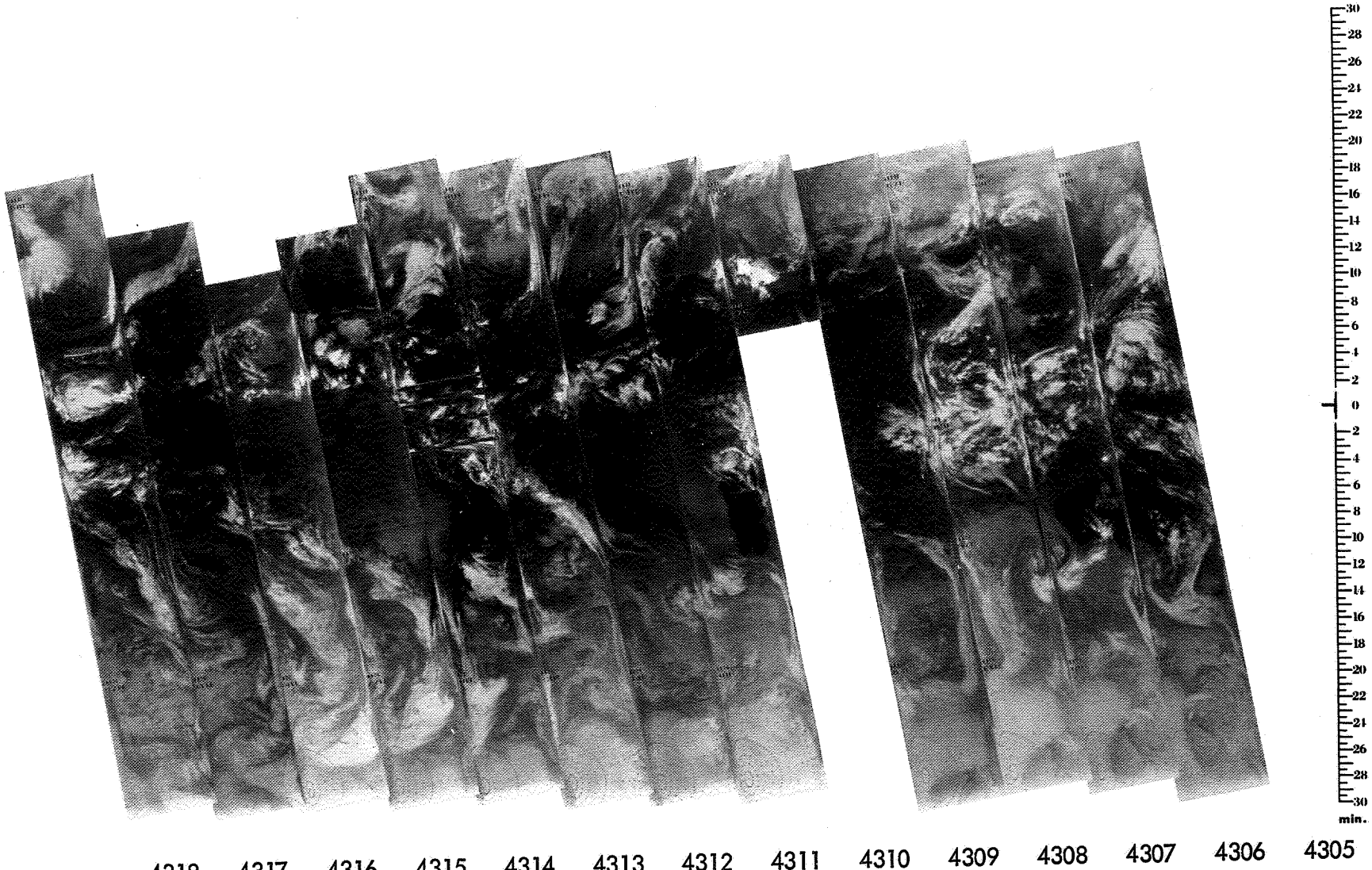
11.5 μm



4304 4303 4302 4301 4300 4299 4298 4297 4296 4295 4294 4293 4292

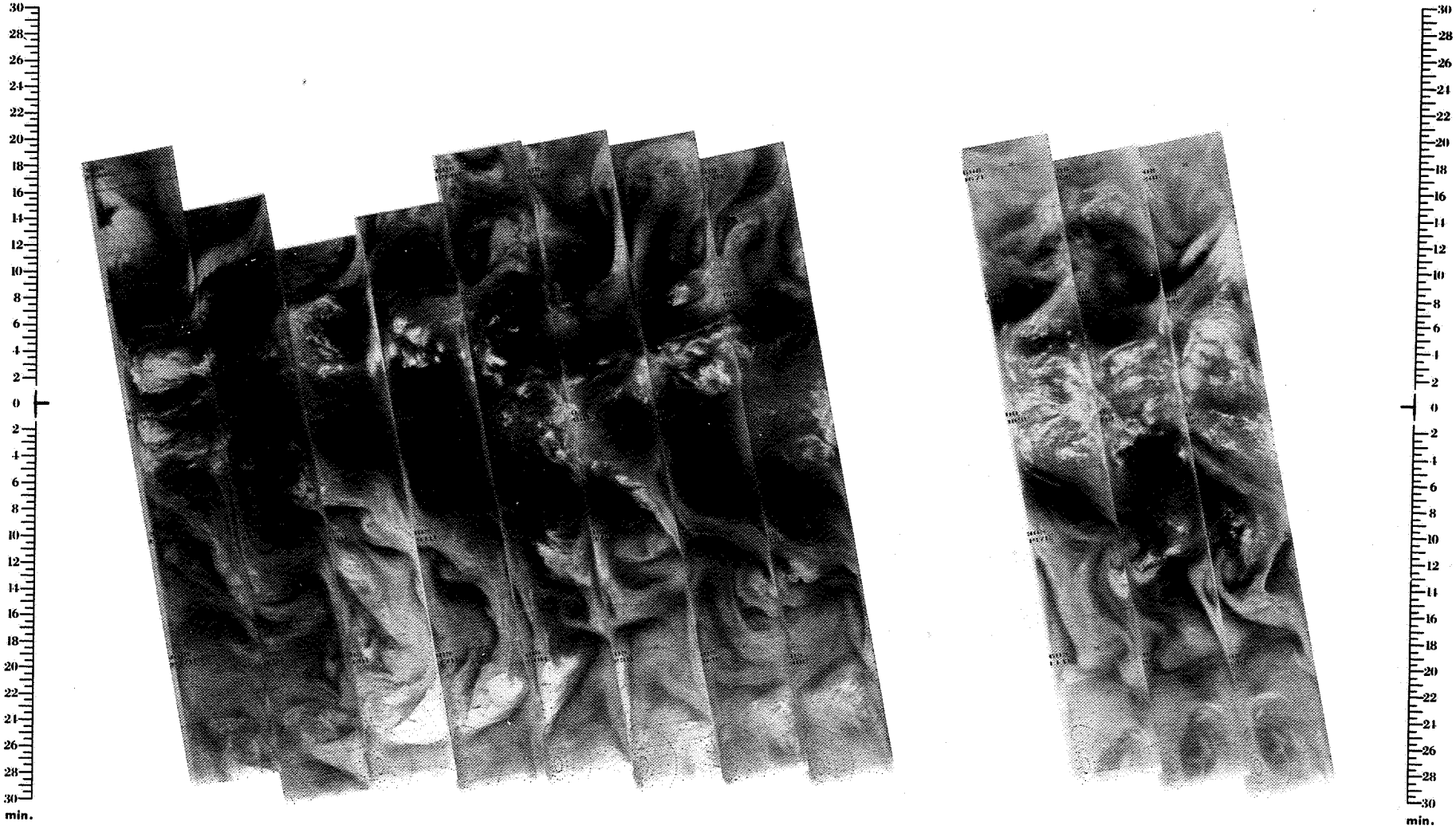
27 OCTOBER 1973

6.7 μm



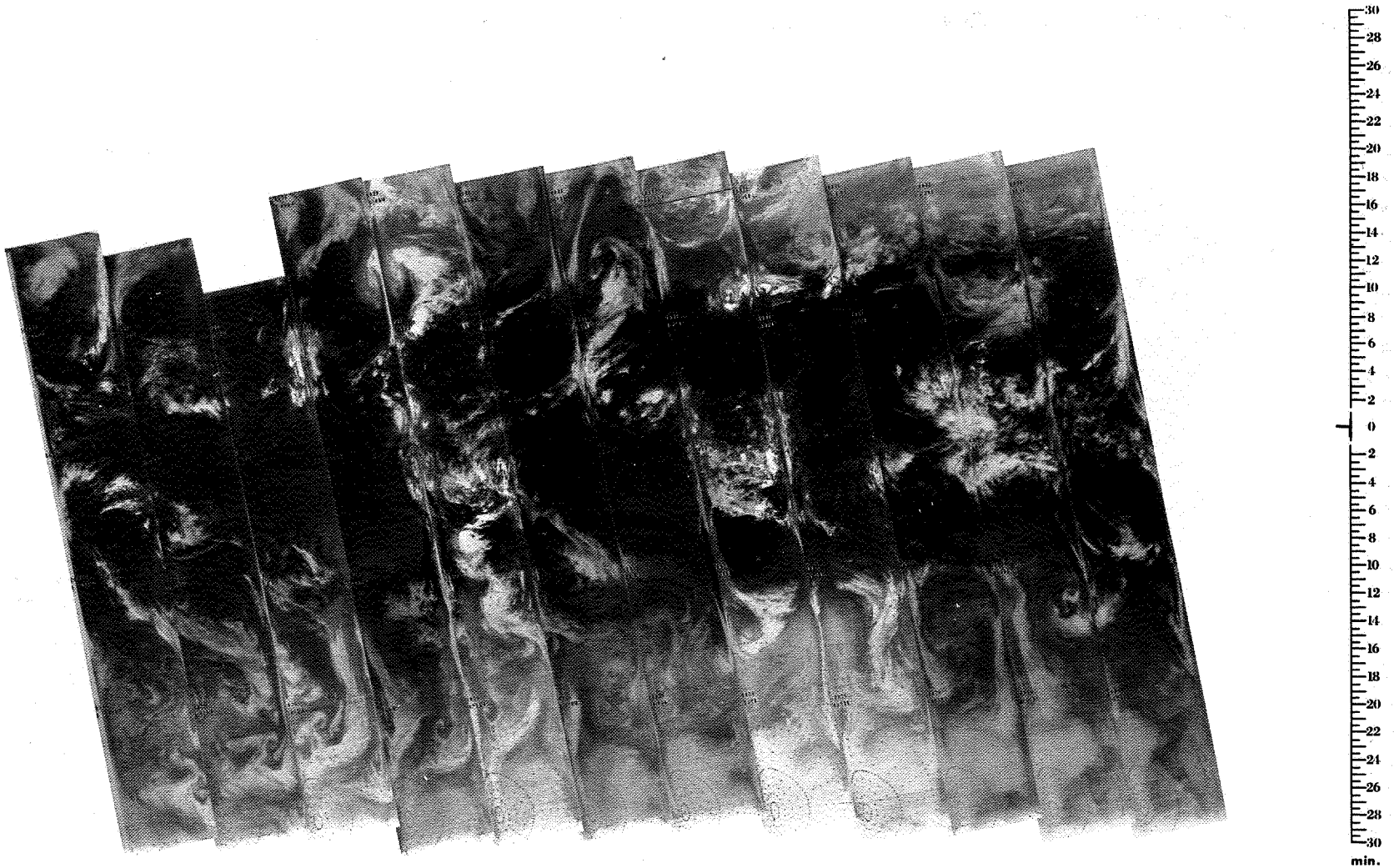
28 OCTOBER 1973

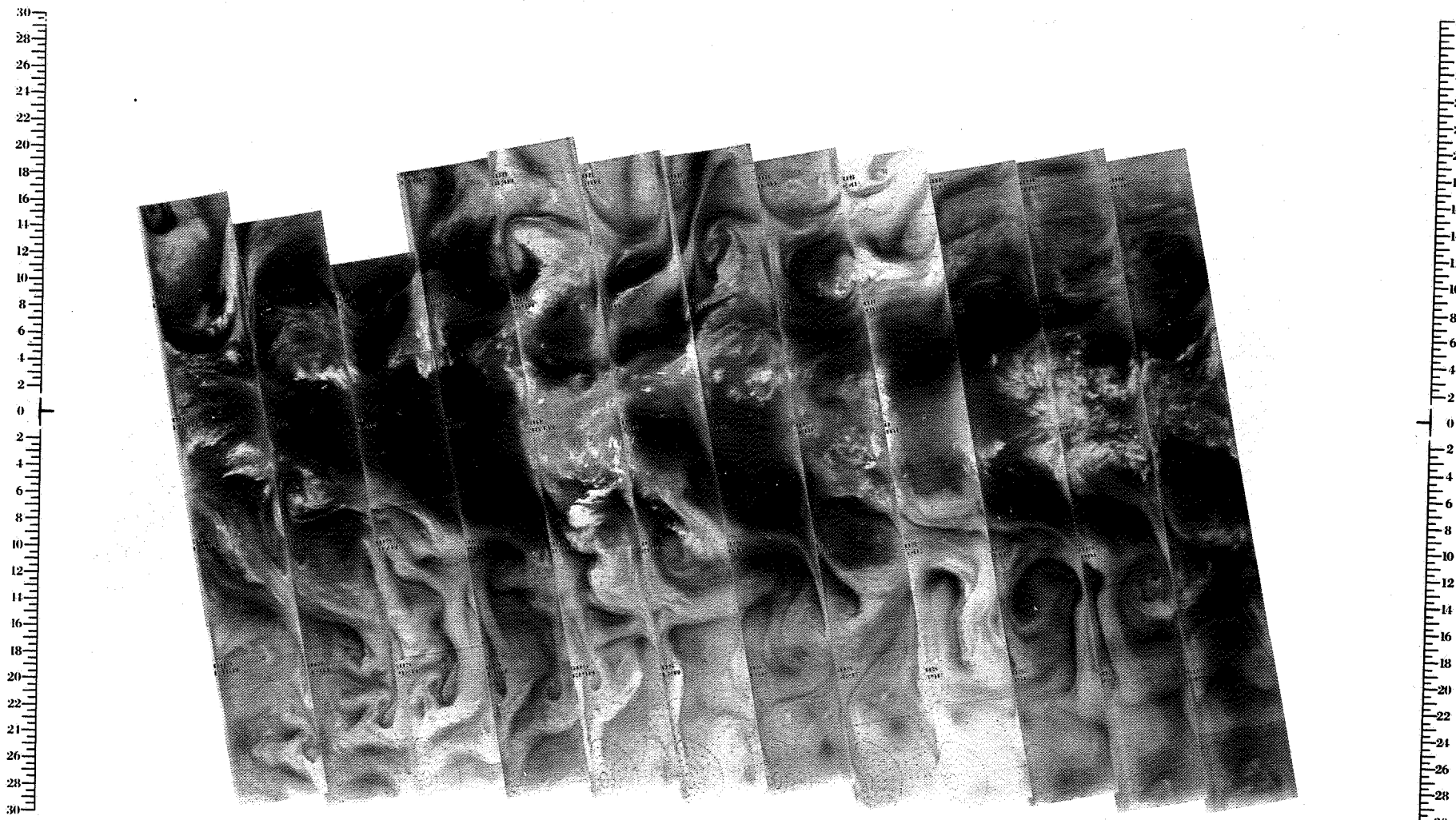
11.5 μm



28 OCTOBER 1973

6.7 μm

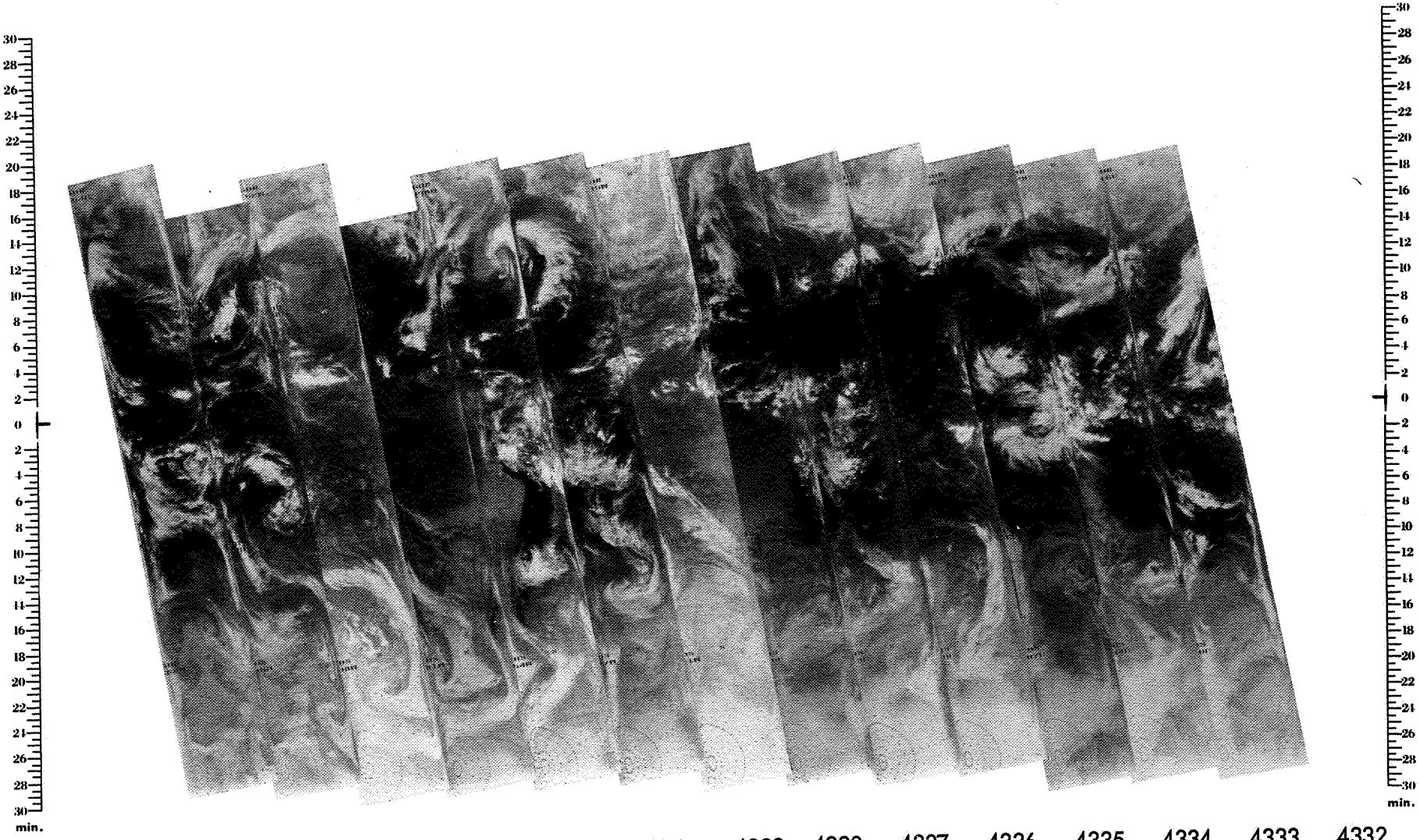

4331 4330 4329 4328 4327 4326 4325 4324 4323 4322 4321 4320 4319
29 OCTOBER 1973
11.5 μm
min.
min.



4331 4330 4329 4328 4327 4326 4325 4324 4323 4322 4321 4320 4319

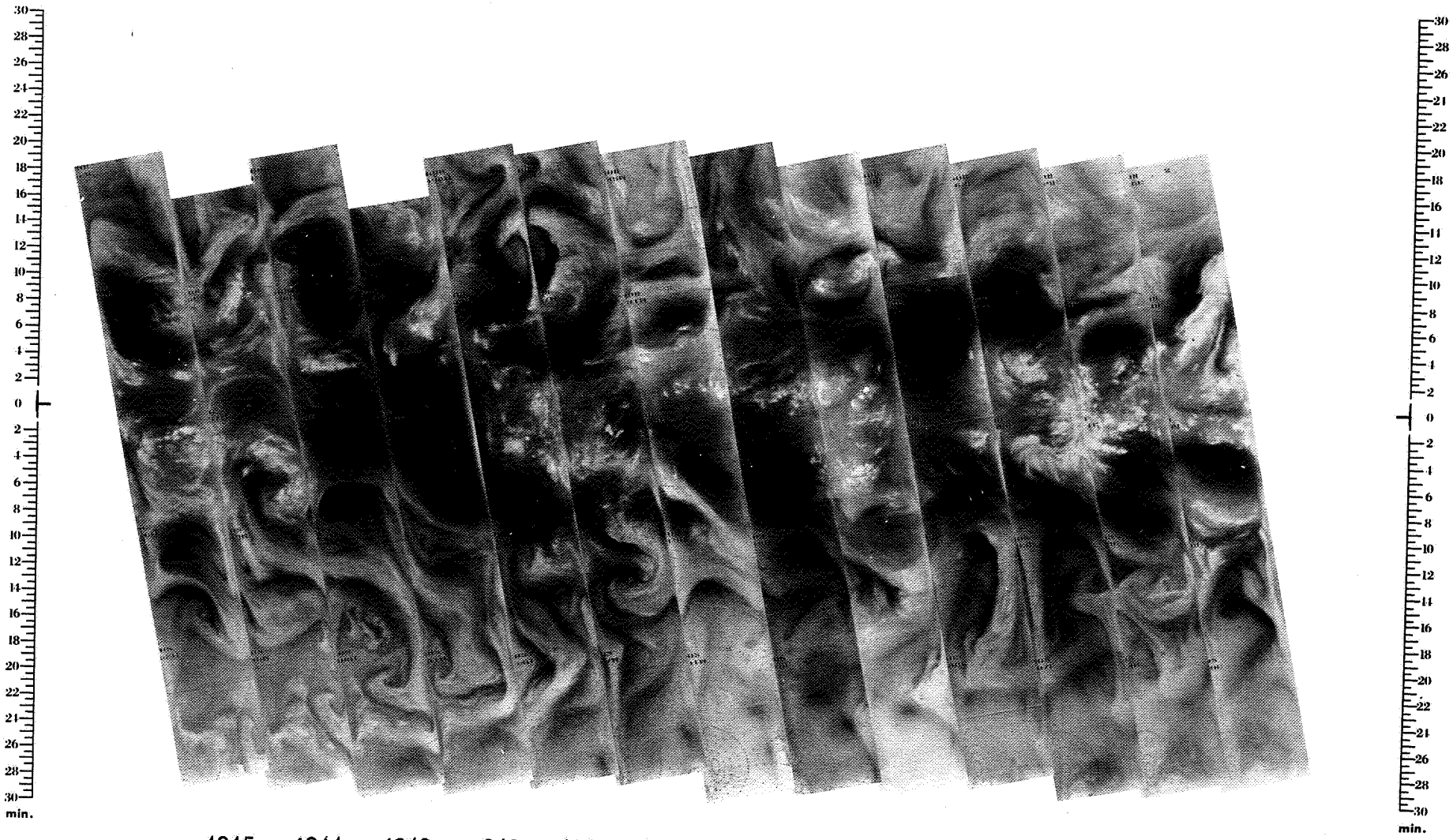
29 OCTOBER 1973

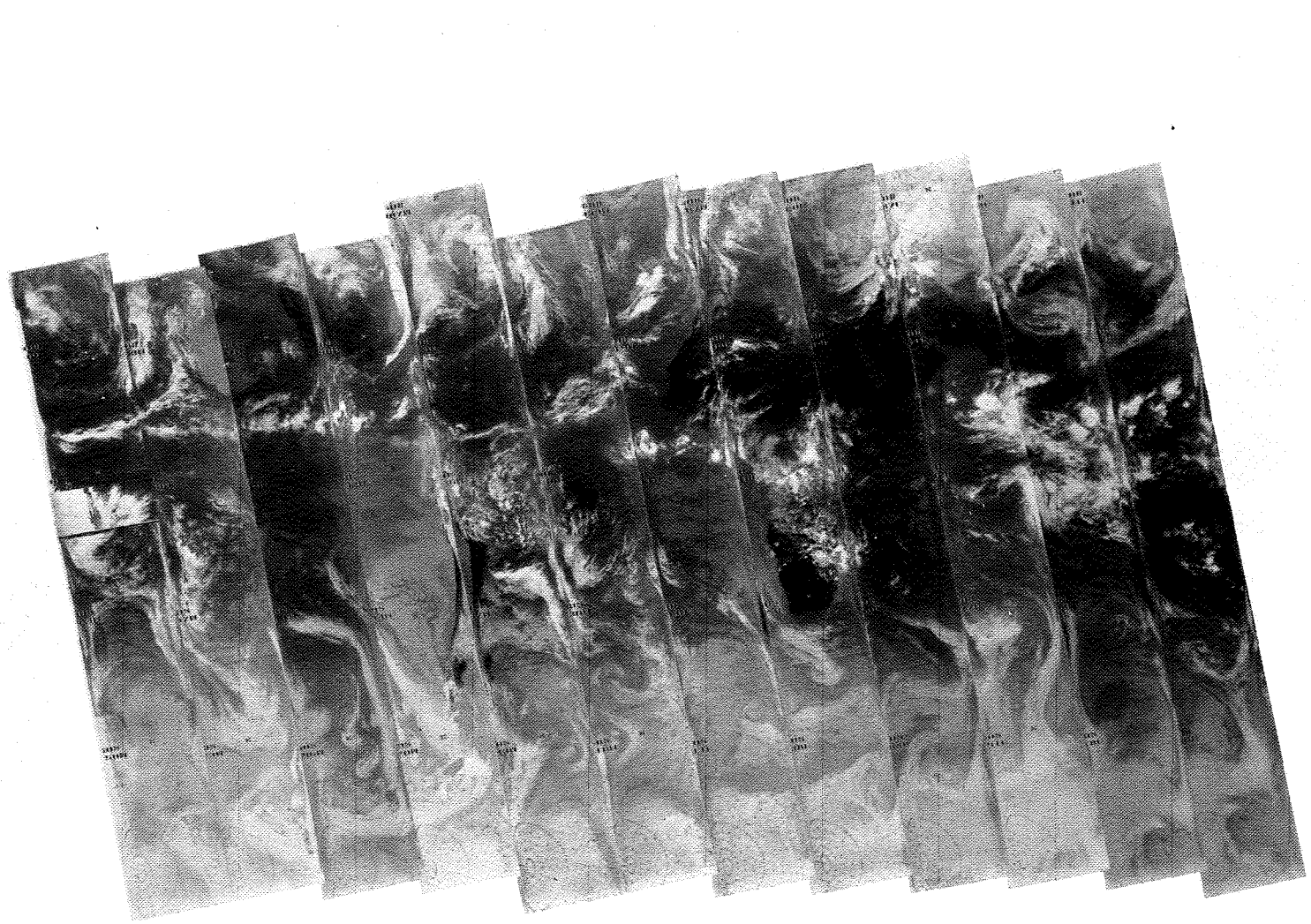
6.7 μm



30 OCTOBER 1973

11.5 μm

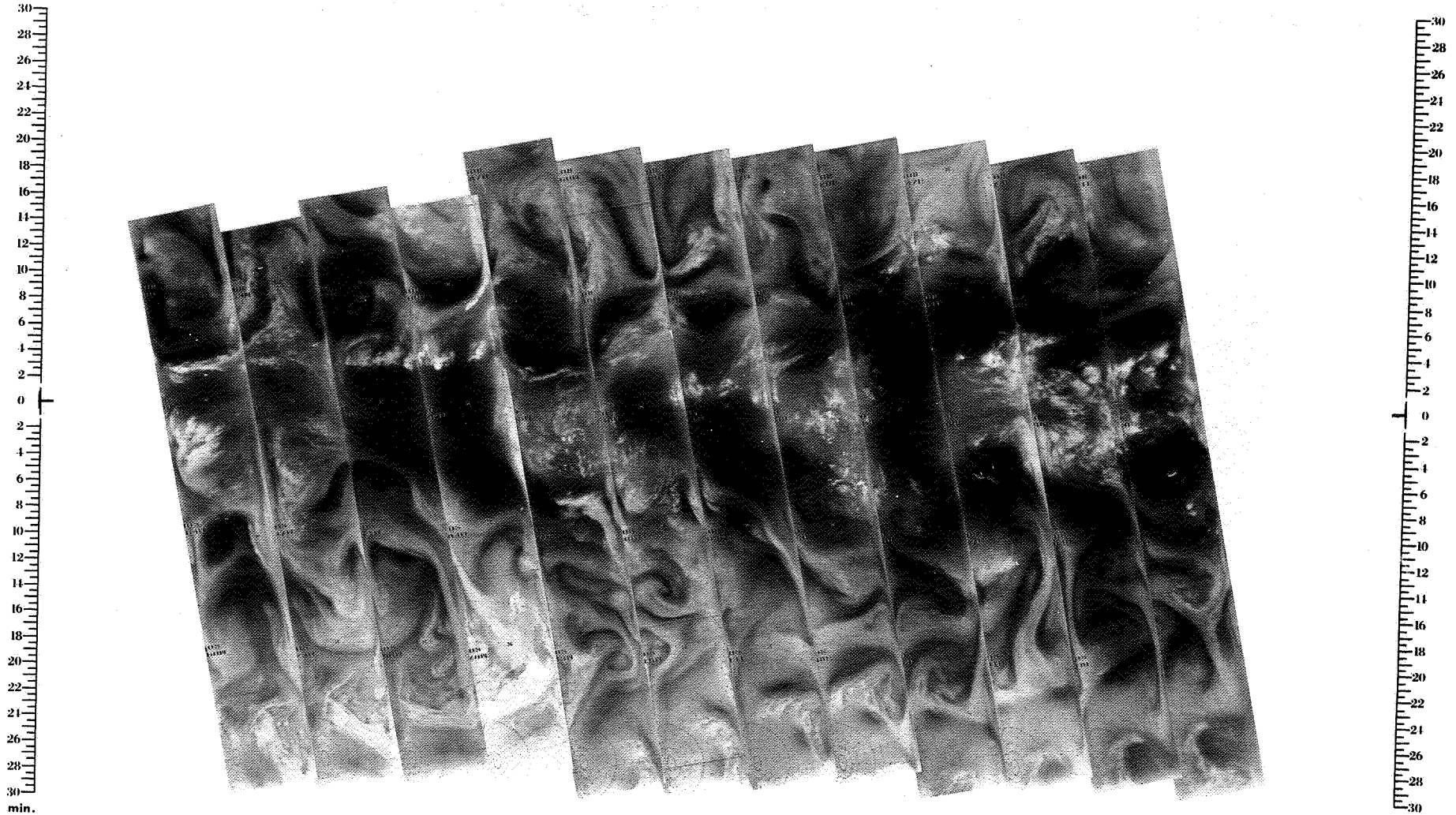

30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4345 4344 4343 4342 4341 4340 4339 4338 4337 4336 4335 4334 4333 4332
30 OCTOBER 1973
6.7 μm

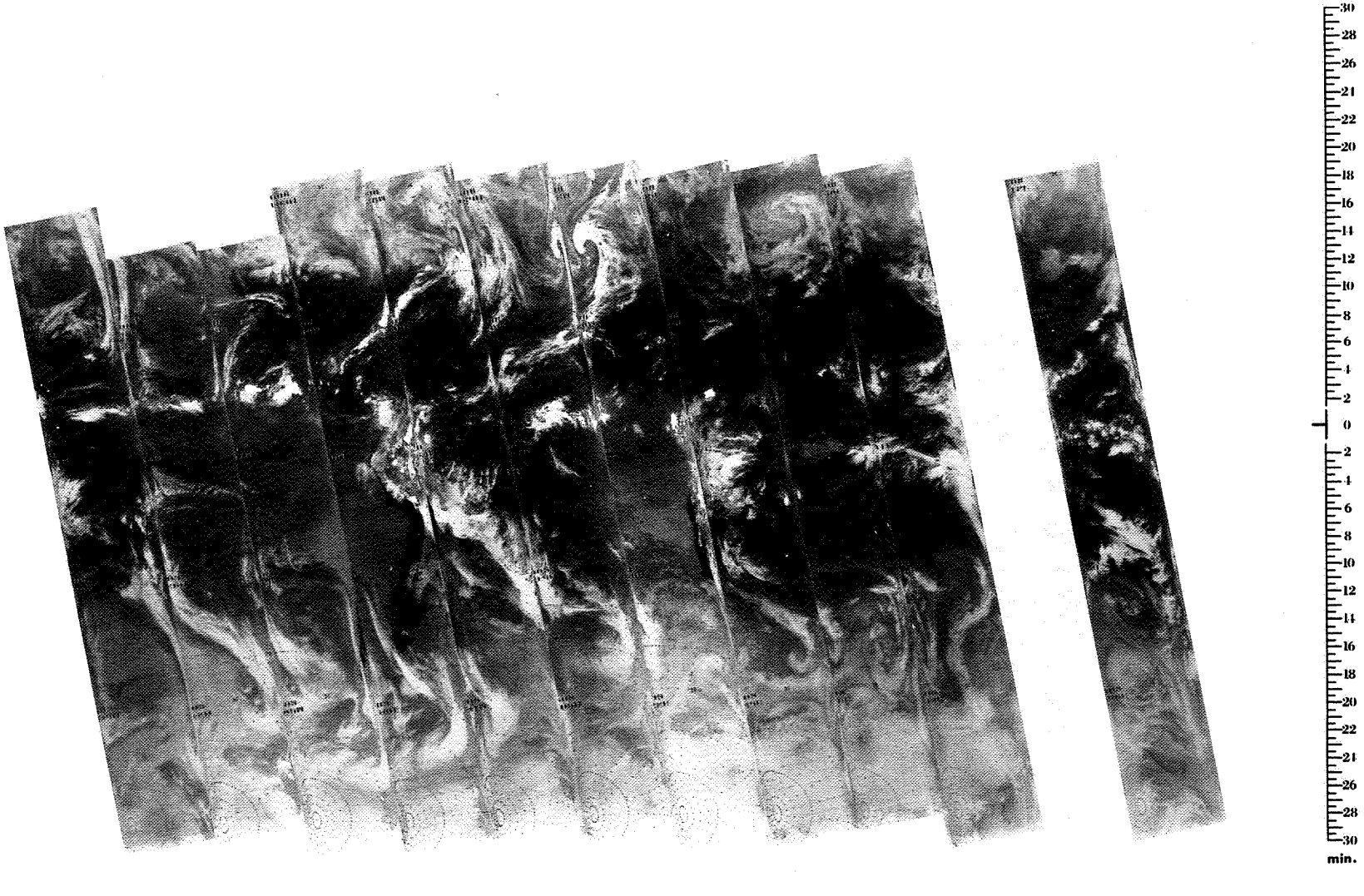


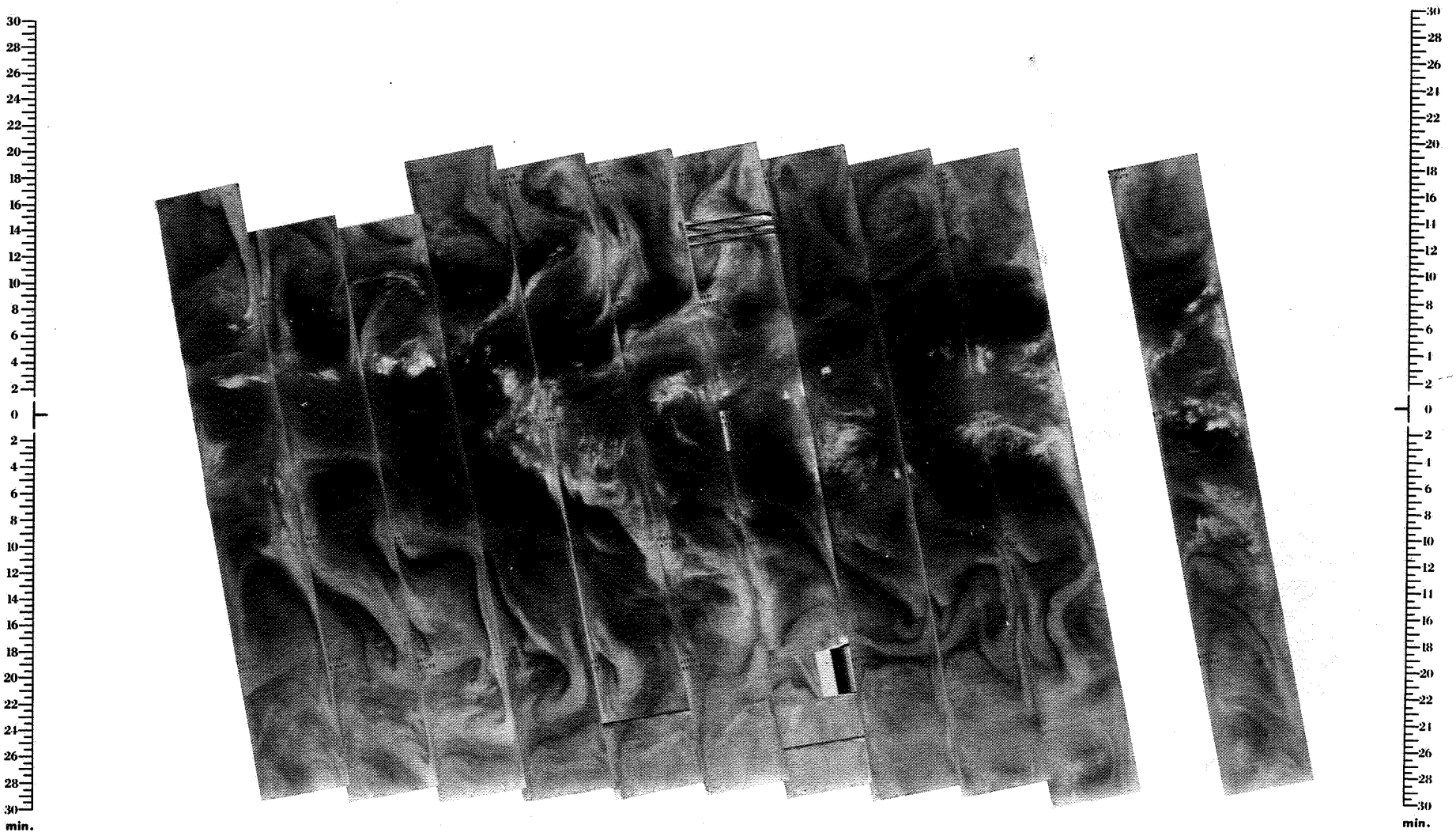
4358 4357 4356 4355 4354 4353 4352 4351 4350 4349 4348 4347 4346

31 OCTOBER 1973

11.5 μm


min.
min.
4358 4357 4356 4355 4354 4353 4352 4351 4350 4349 4348 4347 4346
31 OCTOBER 1973
6.7 μm

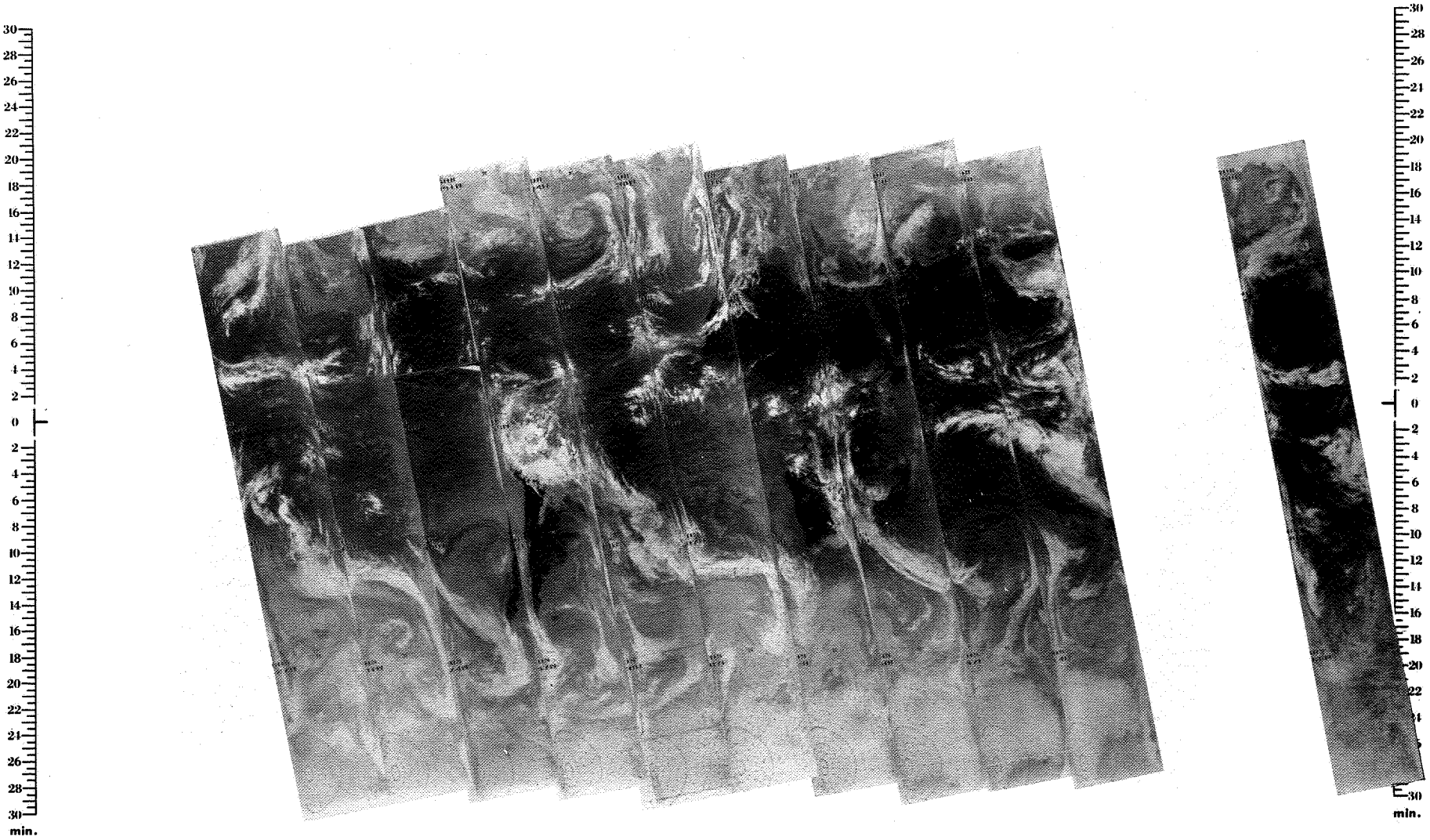

4371
4370
4369
4368
4367
4366
4365
4364
4363
4362
4361
4360
4359
1 NOVEMBER 1973
11.5 μm
min.
min.



4371 4370 4369 4368 4367 4366 4365 4364 4363 4362 4361 4360 4359

1 NOVEMBER 1973

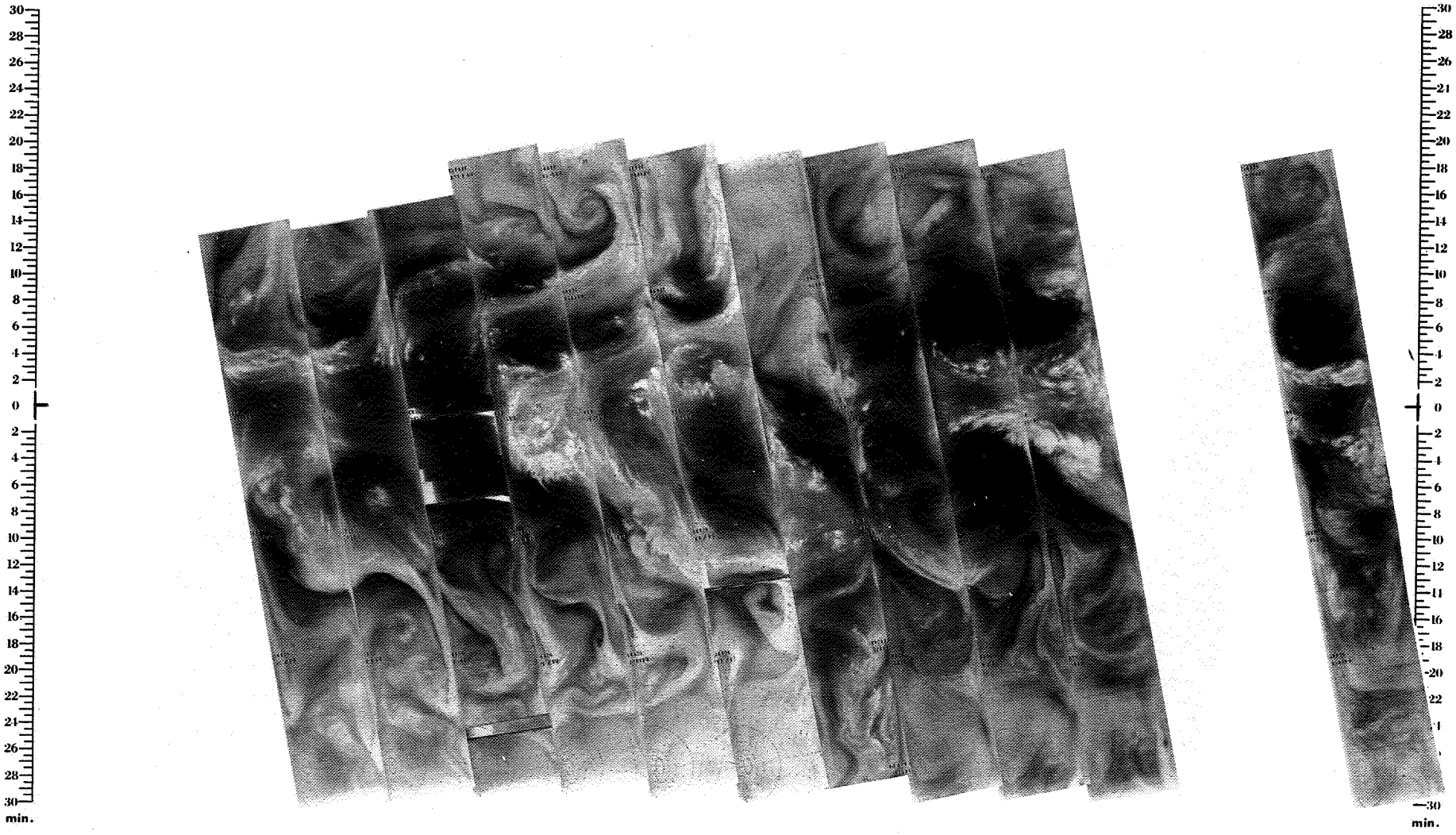
6.7 μm



4385 4384 4383 4382 4381 4380 4379 4378 4377 4376 4375 4374 4373 4372

2 NOVEMBER 1973

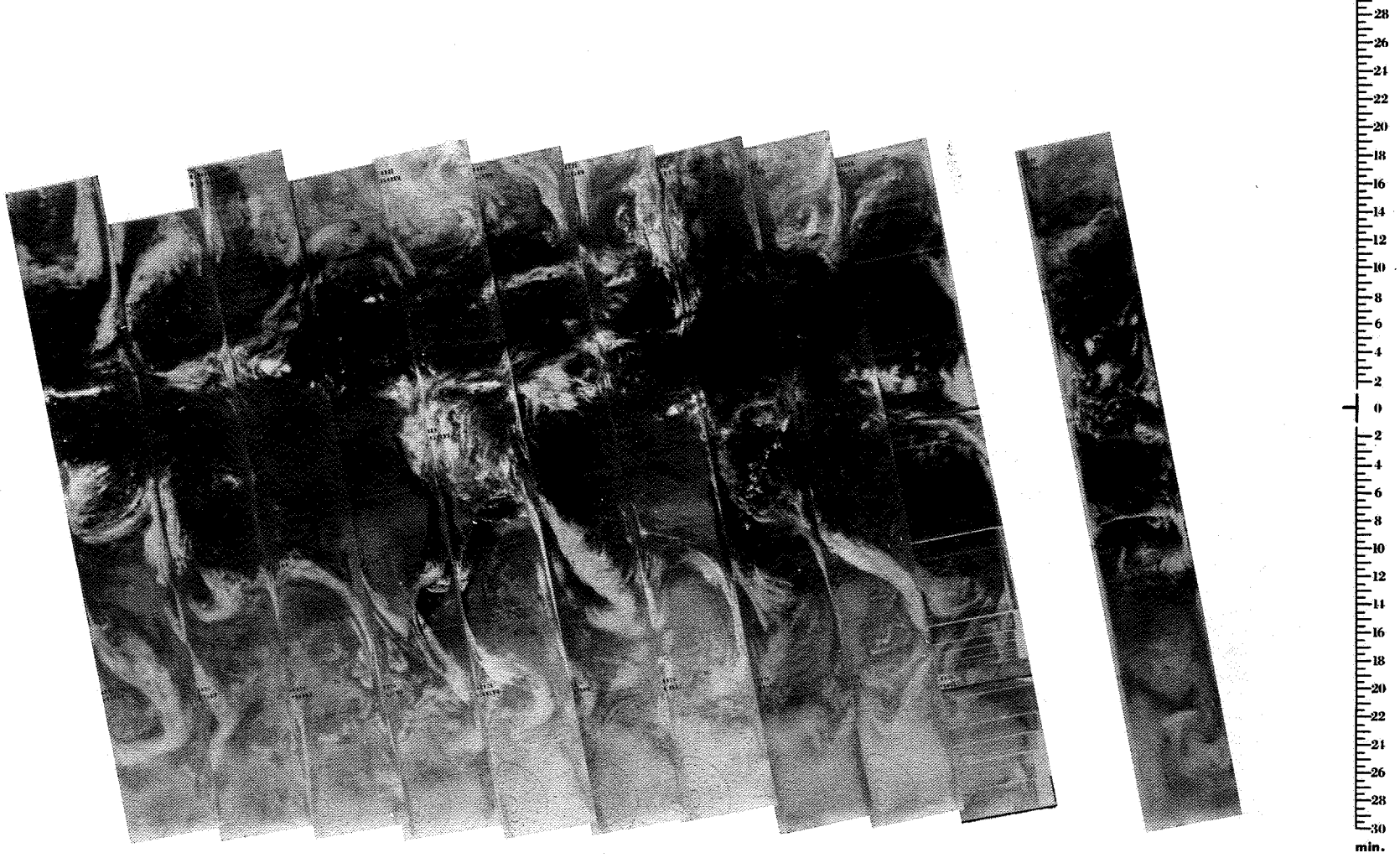
11.5 μm



4385 4384 4383 4382 4381 4380 4379 4378 4377 4376 4375 4374 4373 4372

2 NOVEMBER 1973

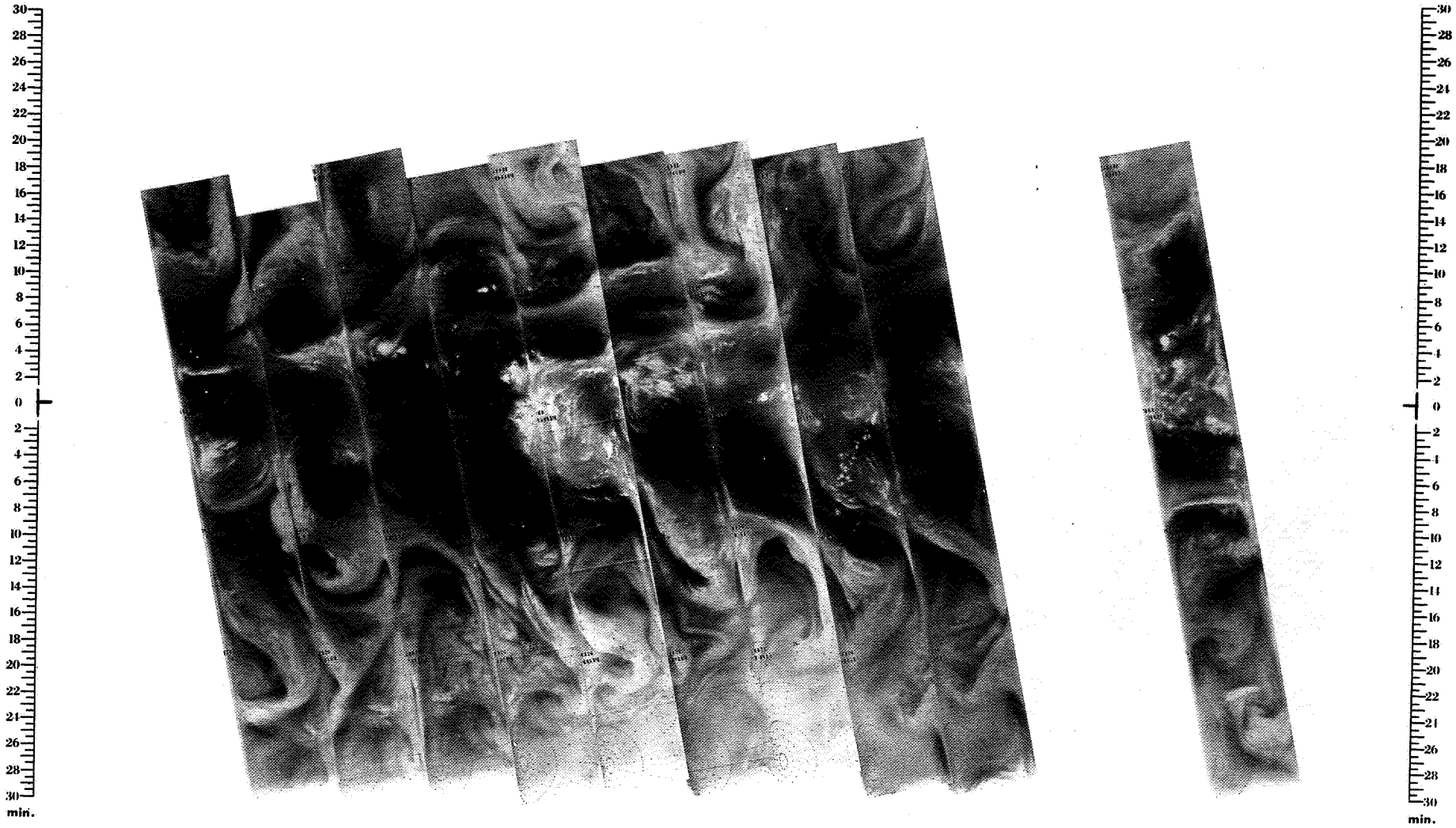
6.7 μm



4398 4397 4396 4395 4394 4393 4392 4391 4390 4389 4388 4387 4386

3 NOVEMBER 1973

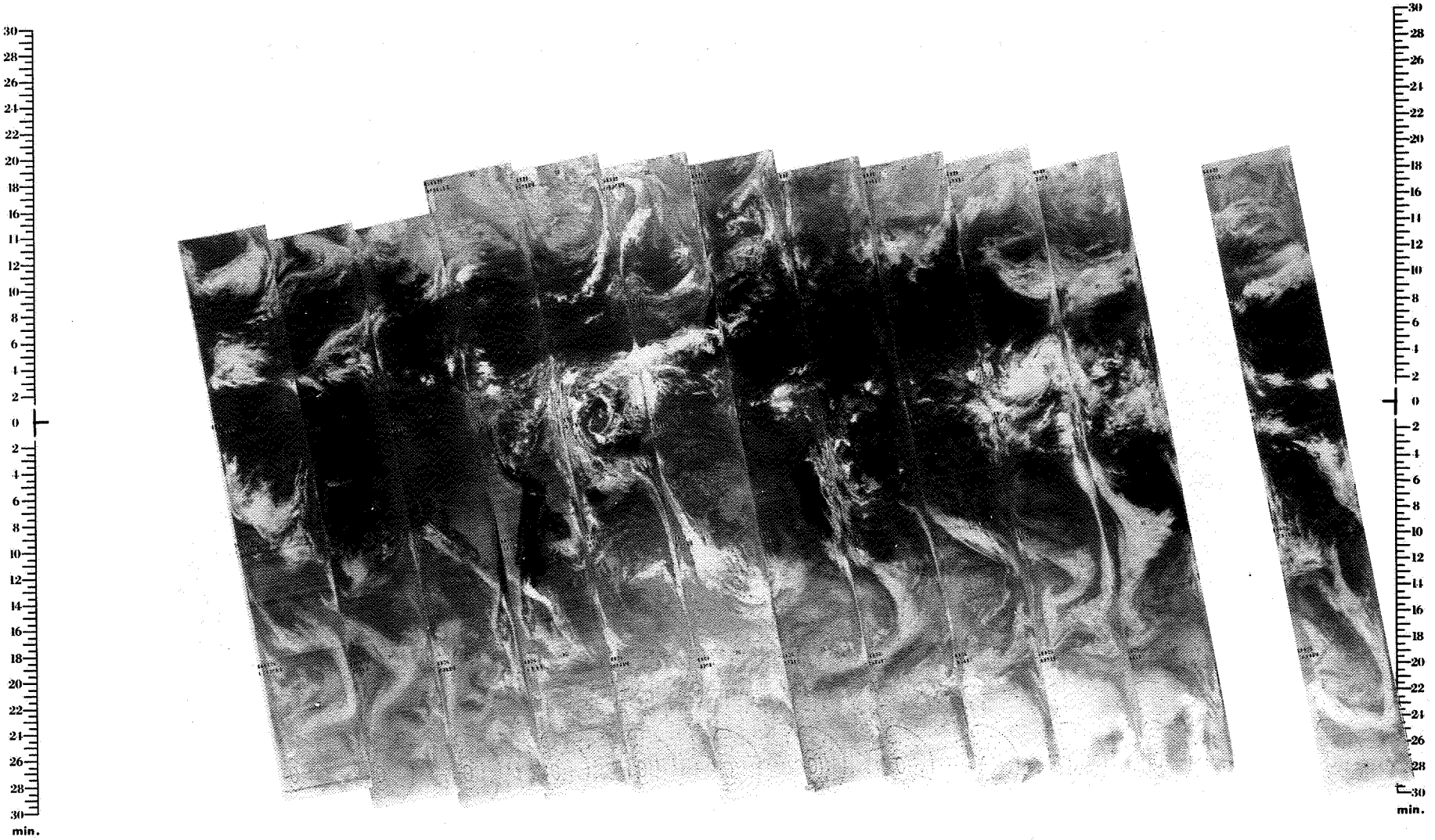
11.5 μm



4398 4397 4396 4395 4394 4393 4392 4391 4390 4389 4388 4387 4386

3 NOVEMBER 1973

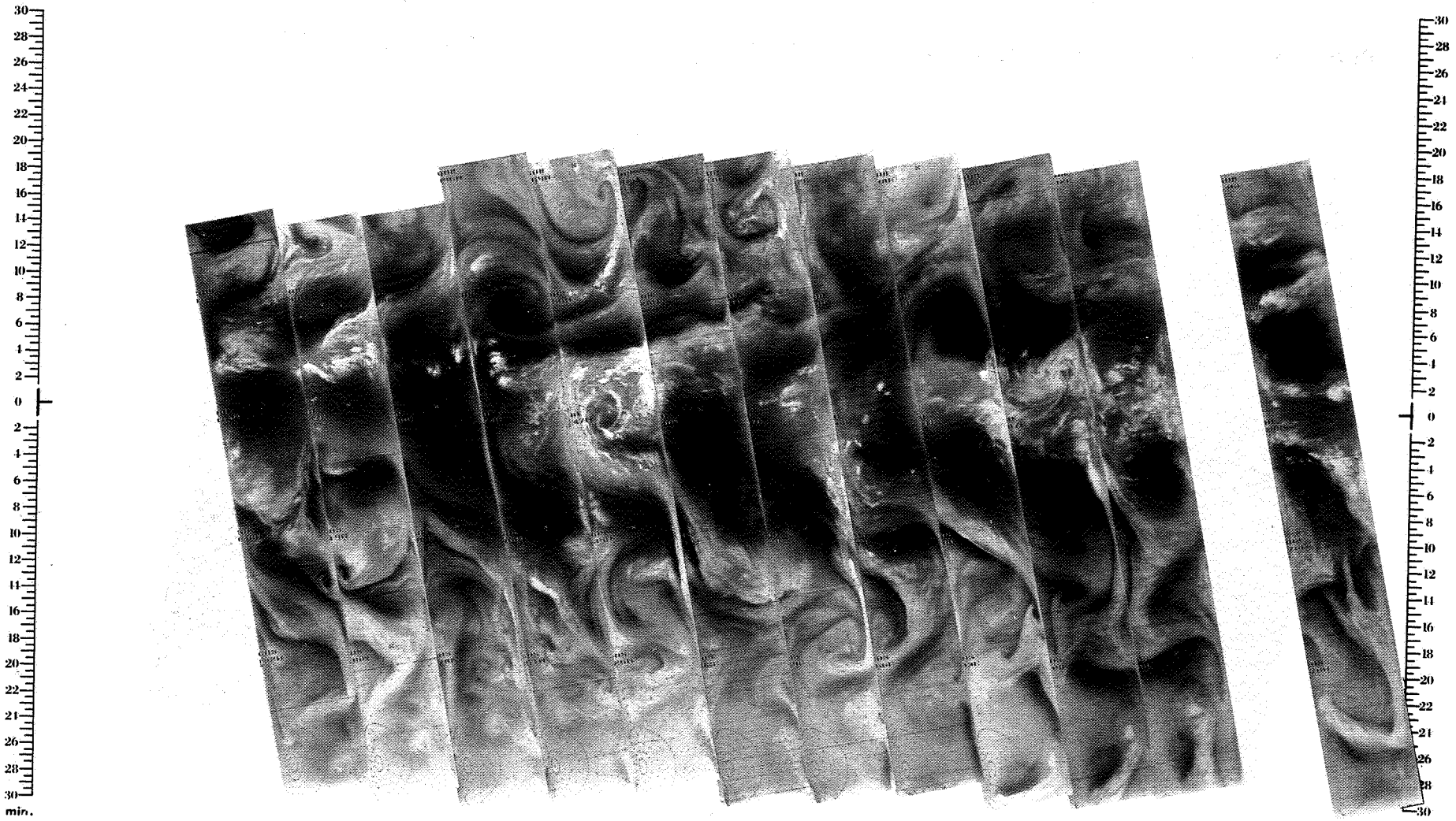
6.7 μm



4412 4411 4410 4409 4408 4407 4406 4405 4404 4403 4402 4401 4400 4399

4 NOVEMBER 1973

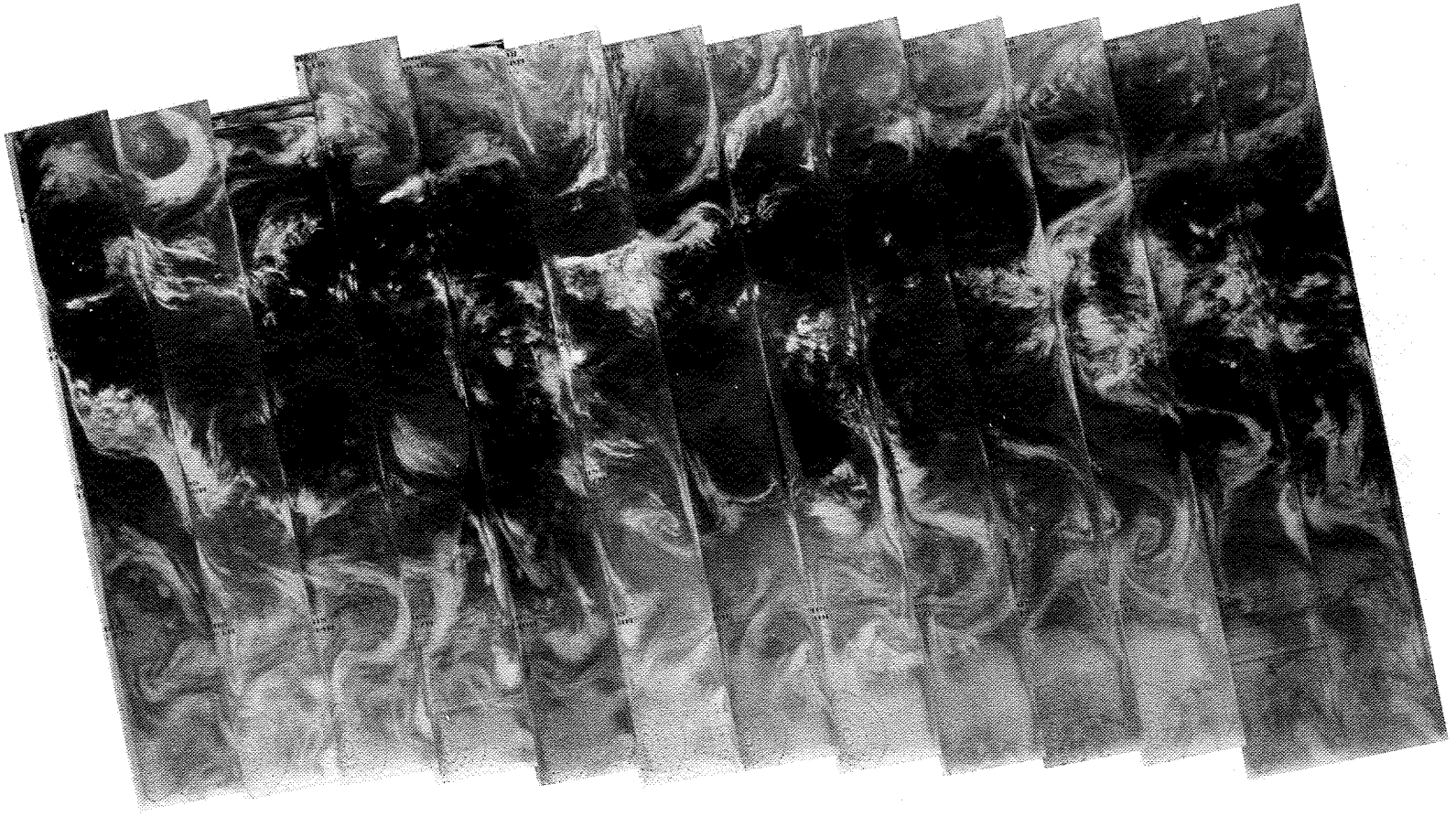
11.5 μm



4412 4411 4410 4409 4408 4407 4406 4405 4404 4403 4402 4401 4400 4399

4 NOVEMBER 1973

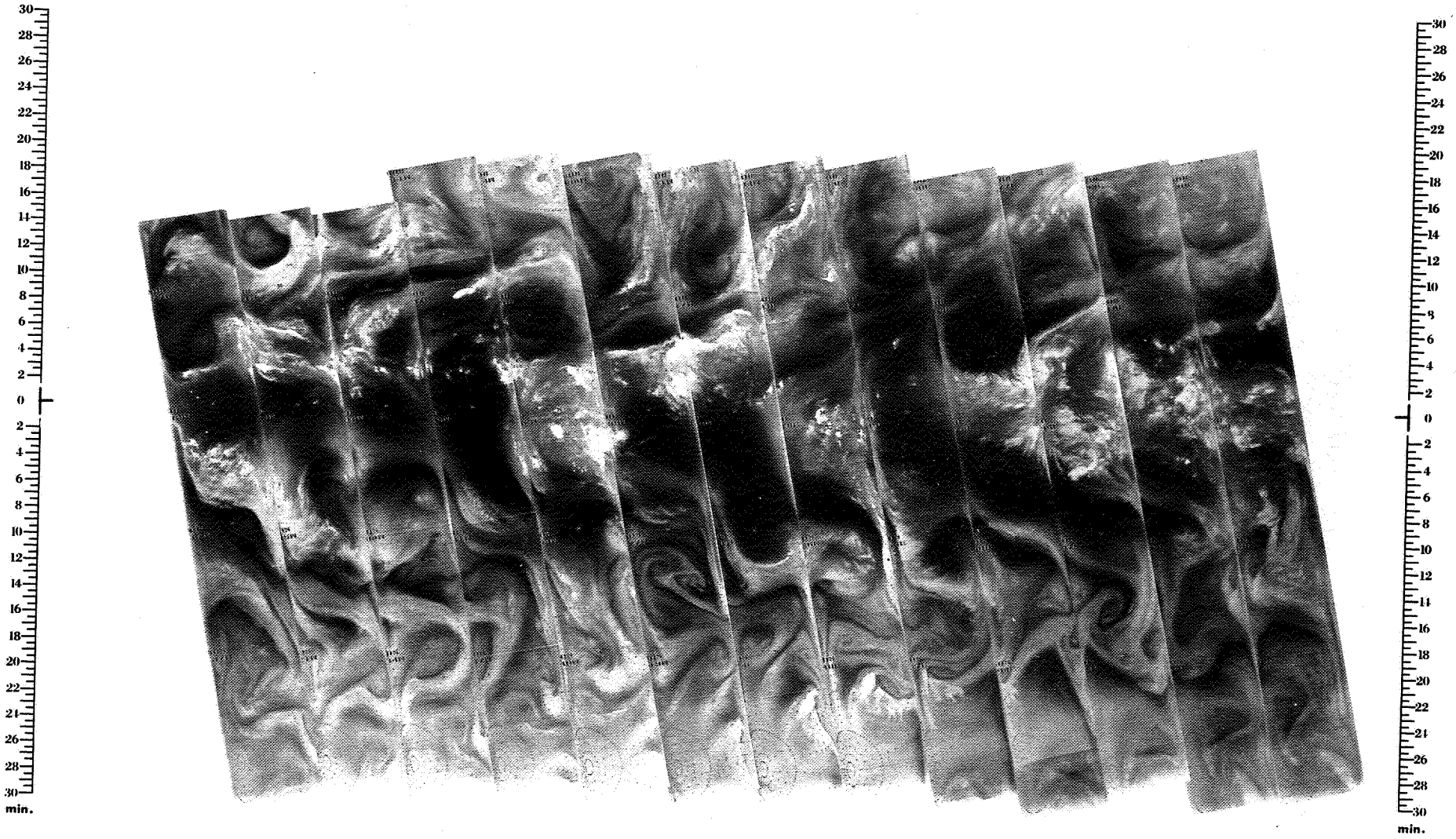
6.7 μm



4425 4424 4423 4422 4421 4420 4419 4418 4417 4416 4415 4414 4413

5 NOVEMBER 1973

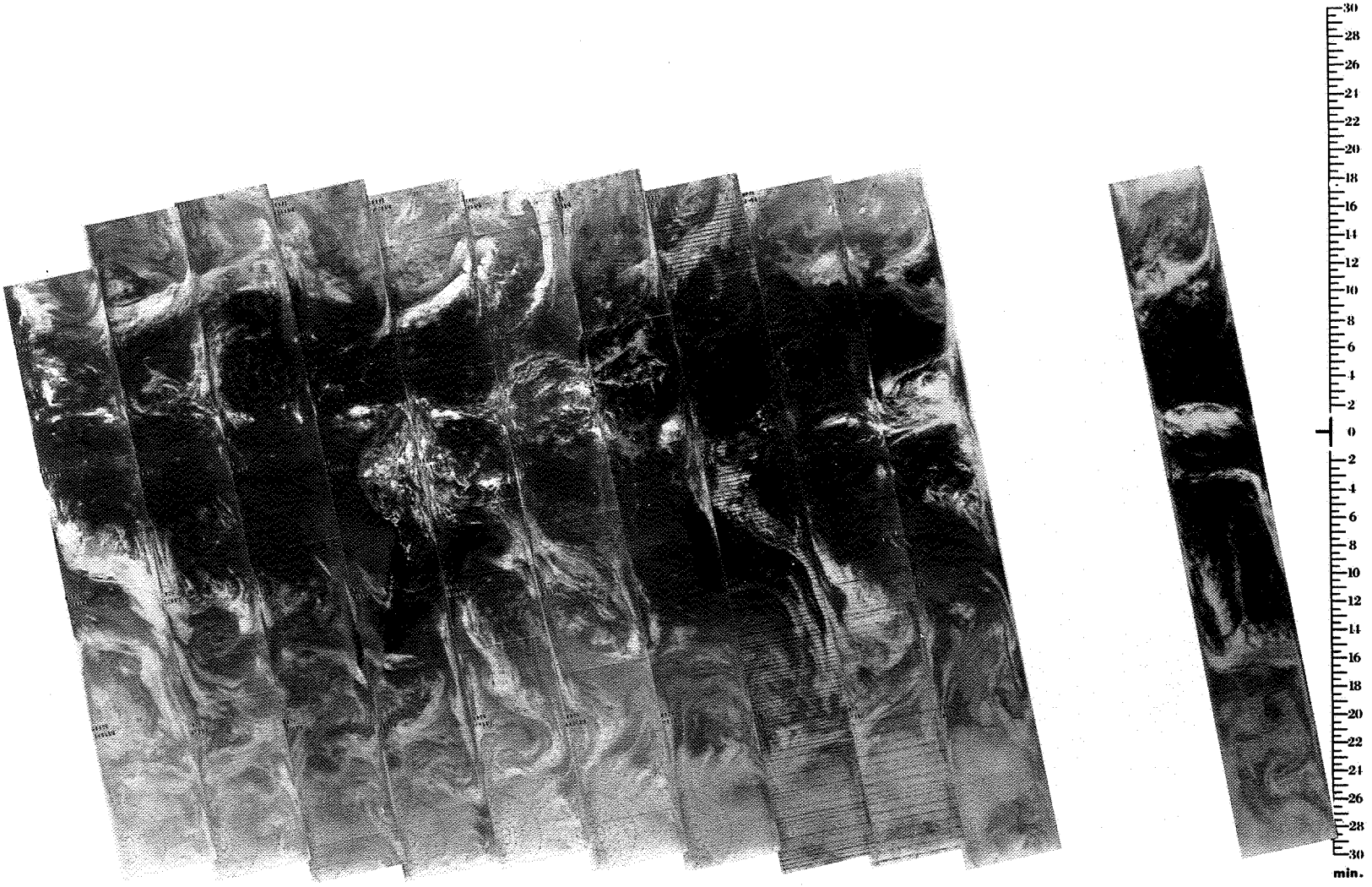
11.5 μm



4425 4424 4423 4422 4421 4420 4419 4418 4417 4416 4415 4414 4413

5 NOVEMBER 1973

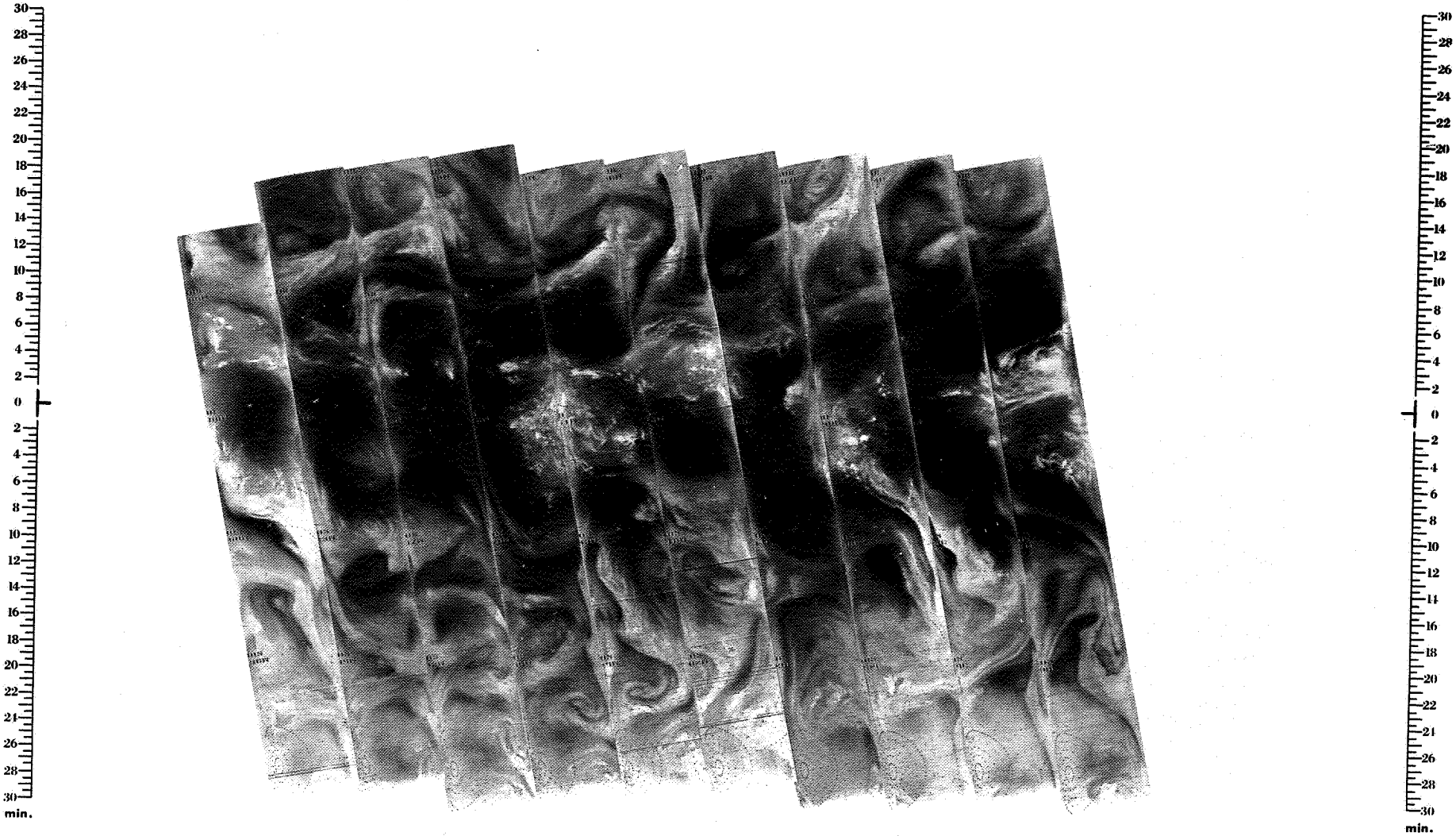
6.7 μm



4-200

6 NOVEMBER 1973

11.5 μm

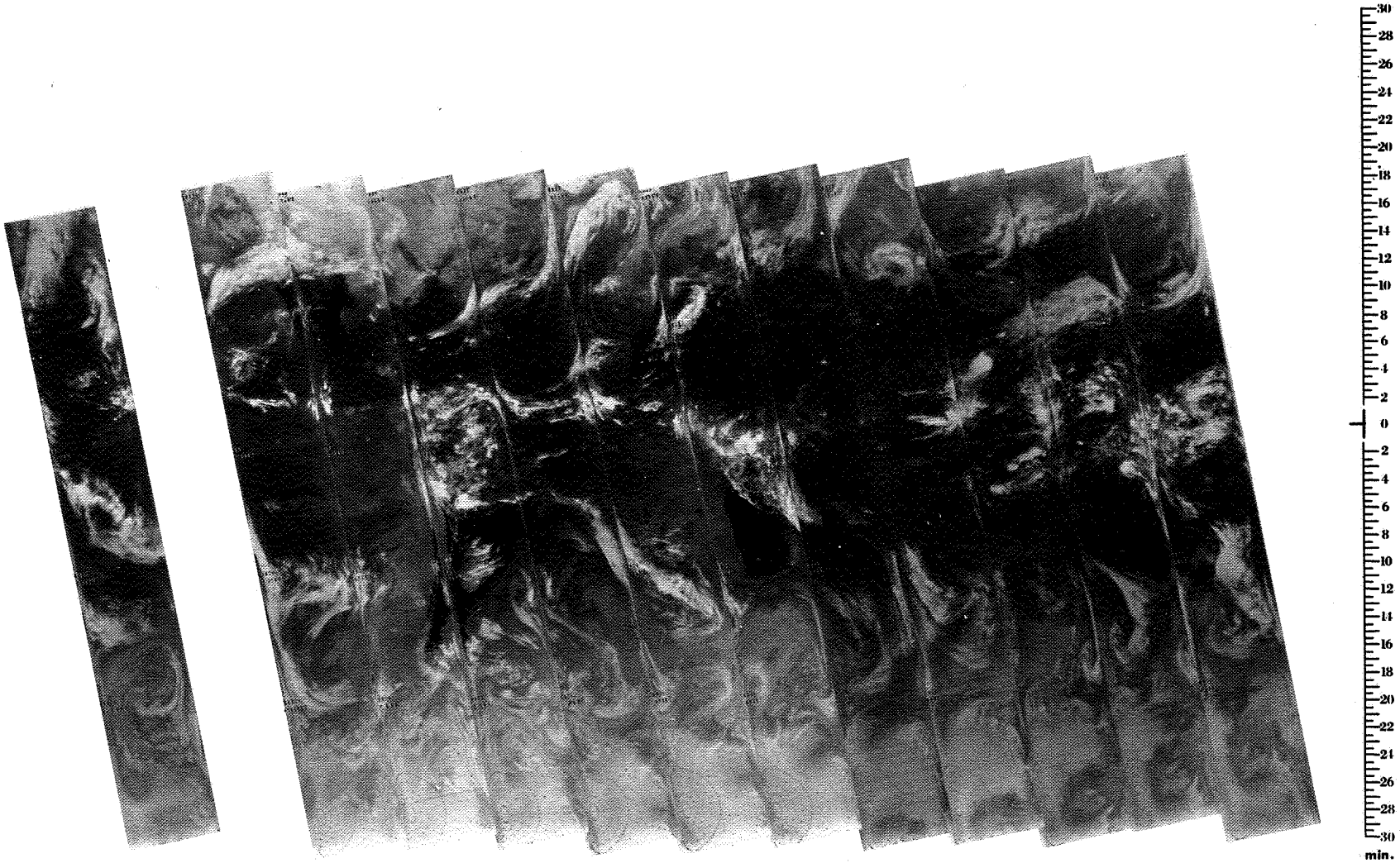


4-201

4439 4438 4437 4436 4435 4434 4433 4432 4431 4430 4429 4428 4427 4426

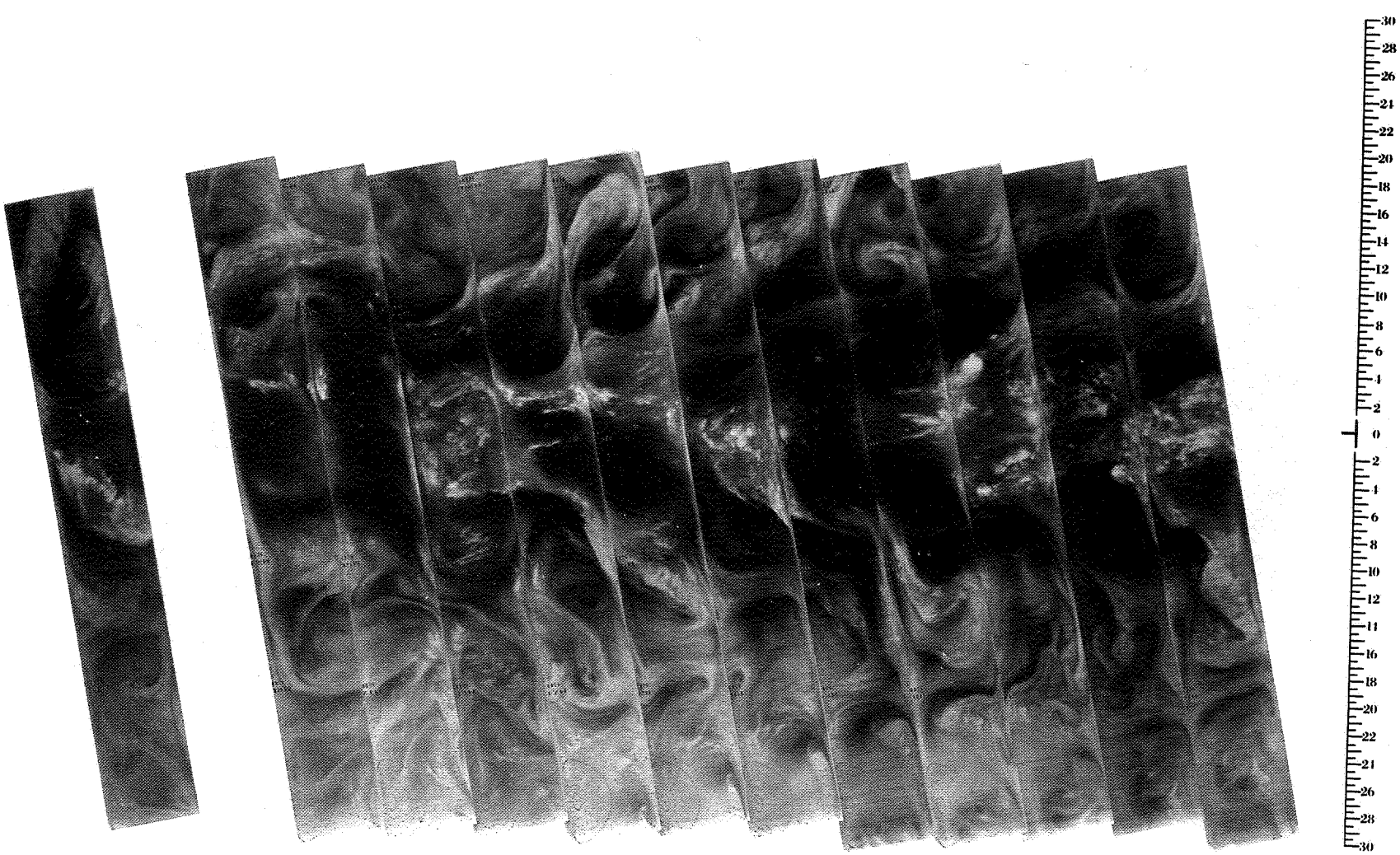
6 NOVEMBER 1973

6.7 μm



7 NOVEMBER 1973

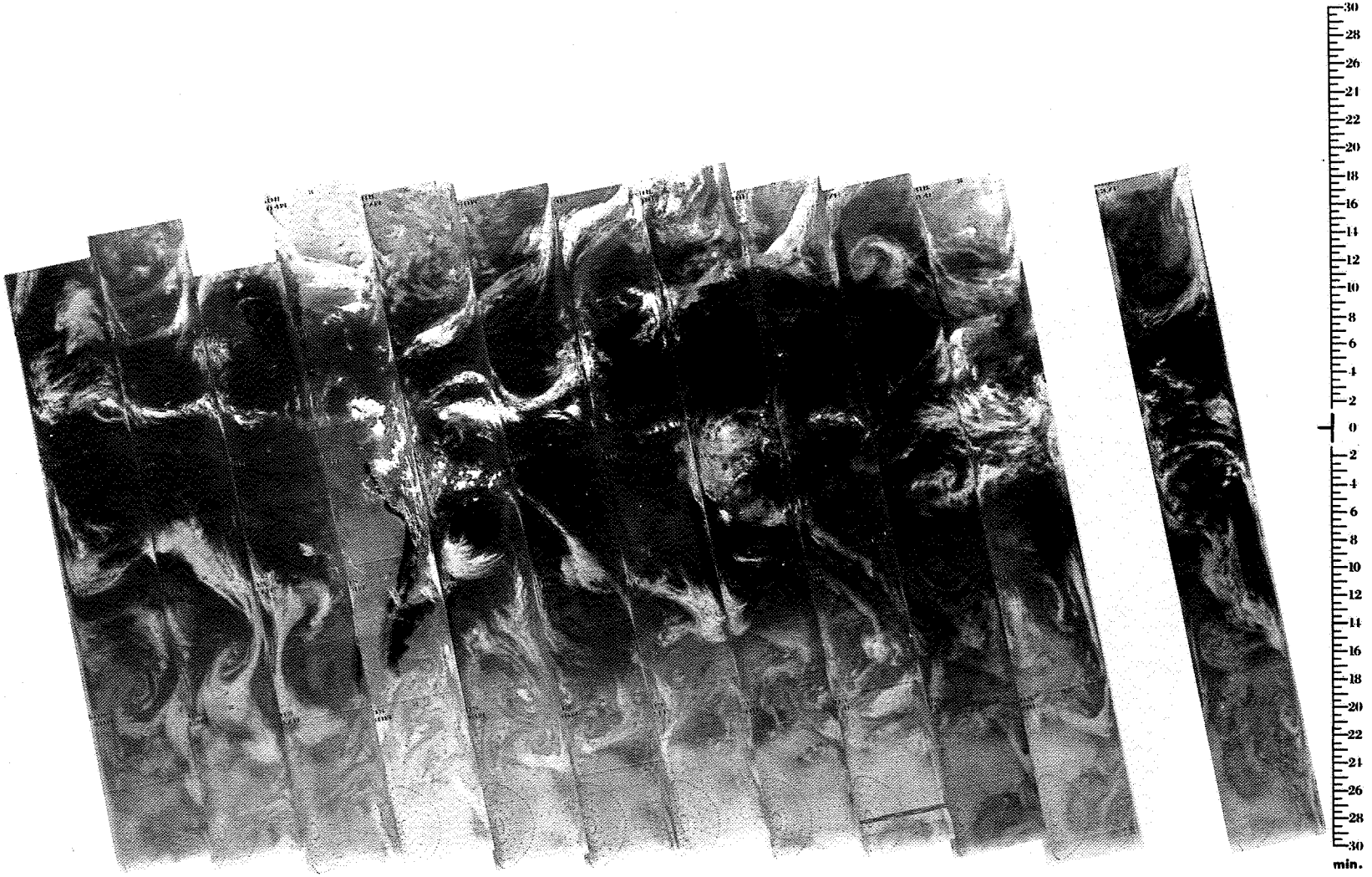
11.5 μm



4452 4451 4450 4449 4448 4447 4446 4445 4444 4443 4442 4441 4440

7 NOVEMBER 1973

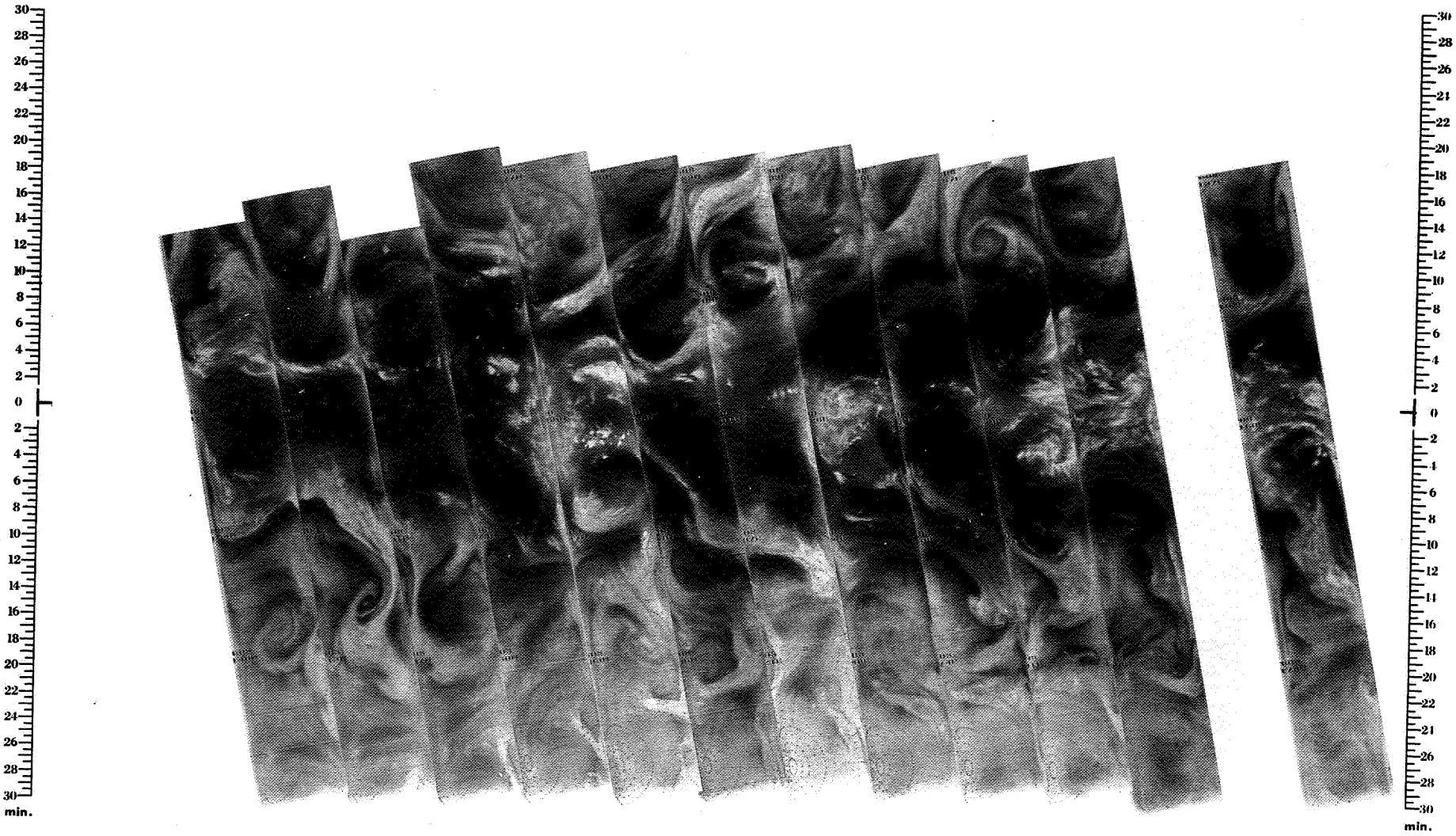
6.7 μm



4465 4464 4463 4462 4461 4460 4459 4458 4457 4456 4455 4454 4453

8 NOVEMBER 1973

11.5 μm



4465 4464 4463 4462 4461 4460 4459 4458 4457 4456 4455 4454 4453

8 NOVEMBER 1973

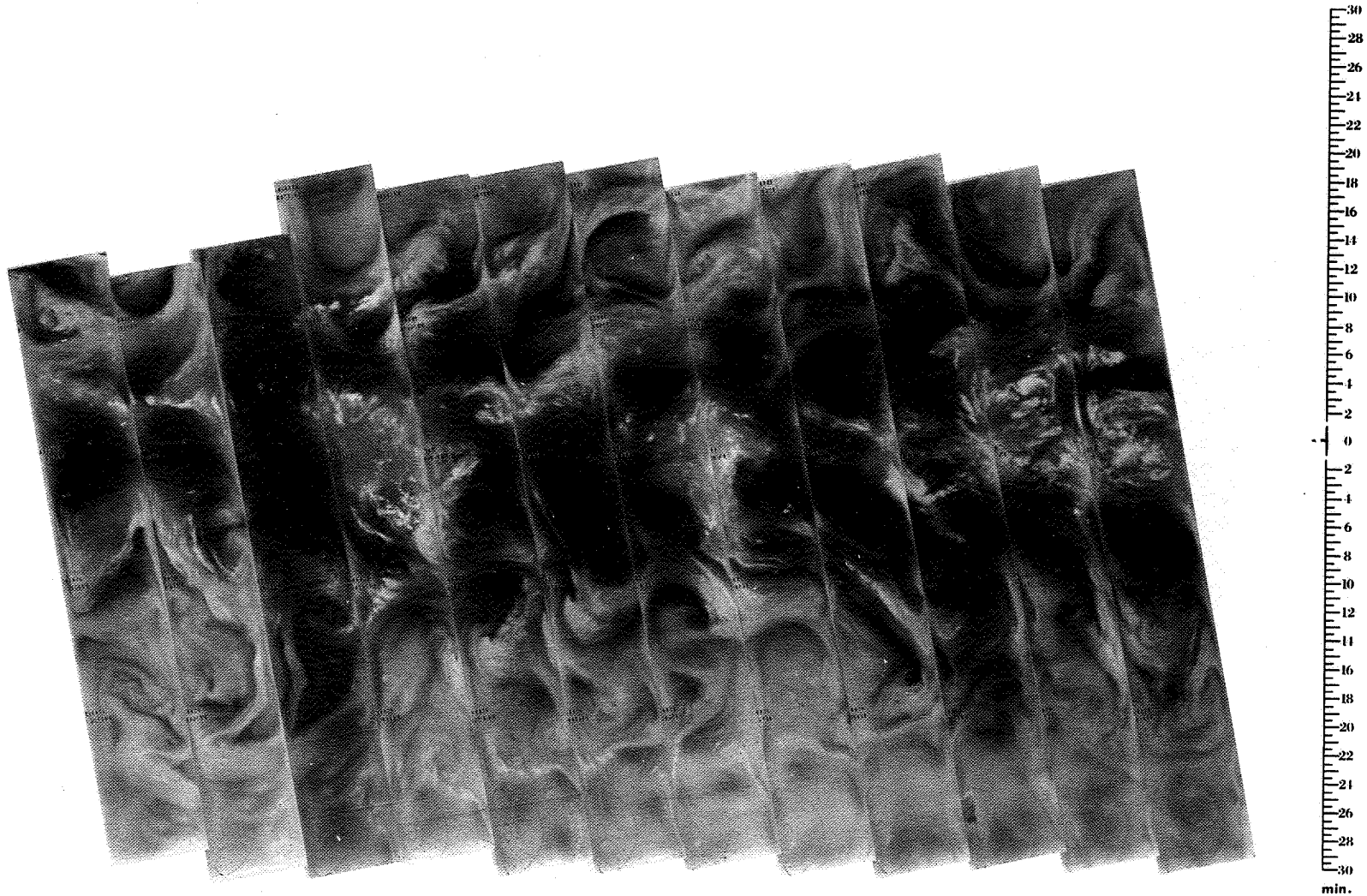
6.7 μm



4479 4478 4477 4476 4475 4474 4473 4472 4471 4470 4469 4468 4467 4466

9 NOVEMBER 1973

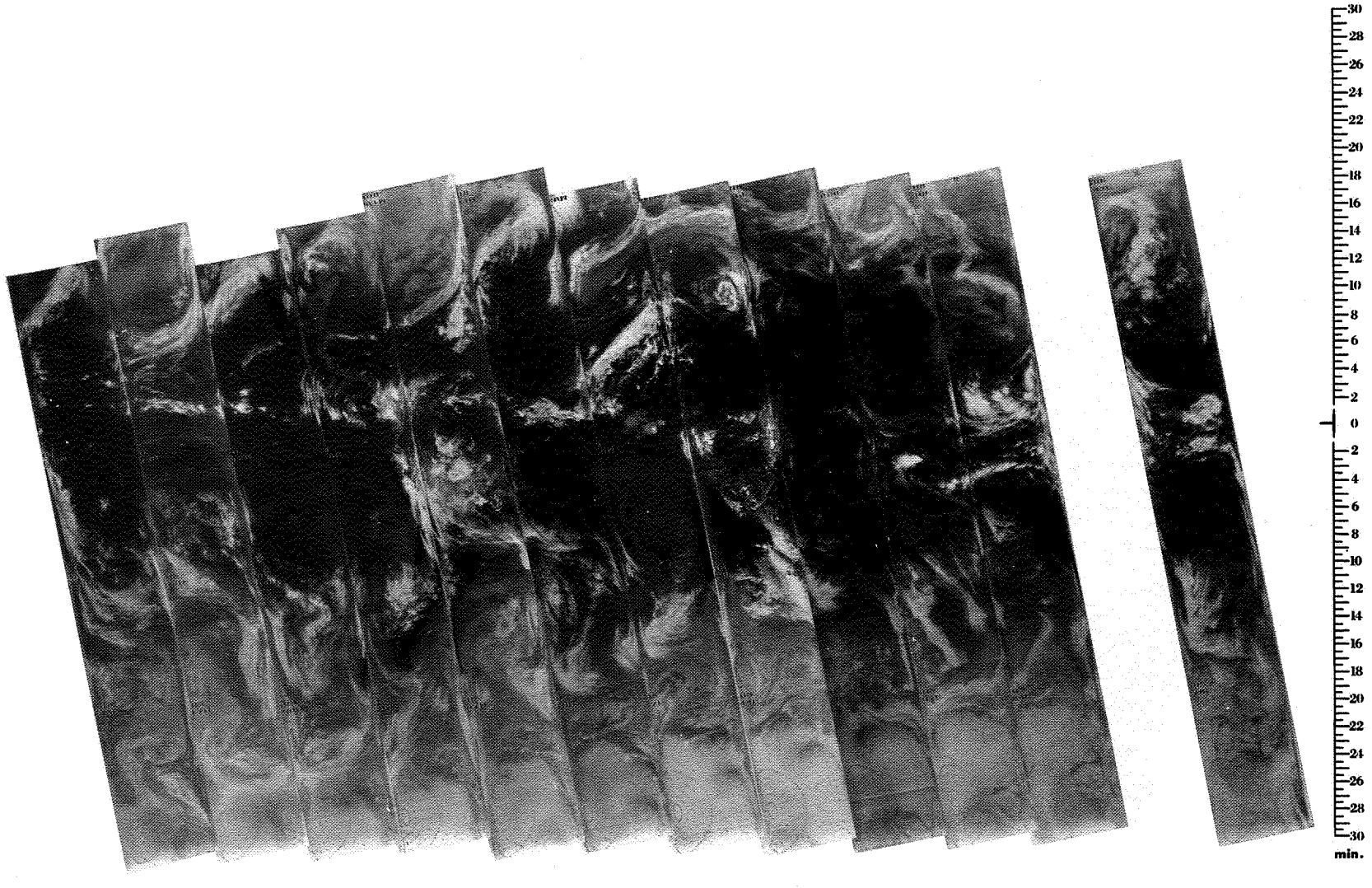
11.5 μm



4479 4478 4477 4476 4475 4474 4473 4472 4471 4470 4469 4468 4467 4466

9 NOVEMBER 1973

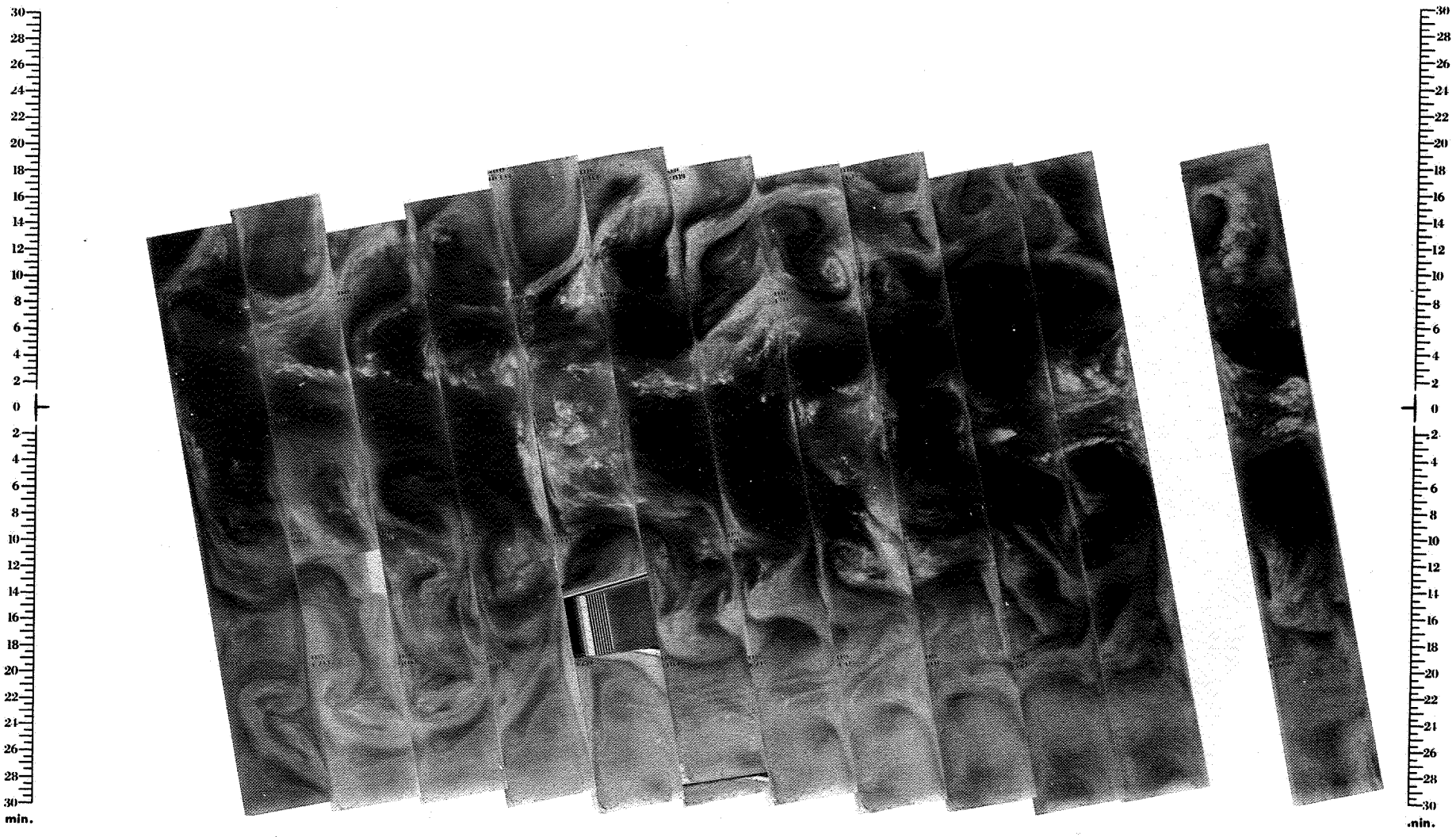
6.7 μm



4492 4491 4490 4489 4488 4487 4486 4485 4484 4483 4482 4481 4480

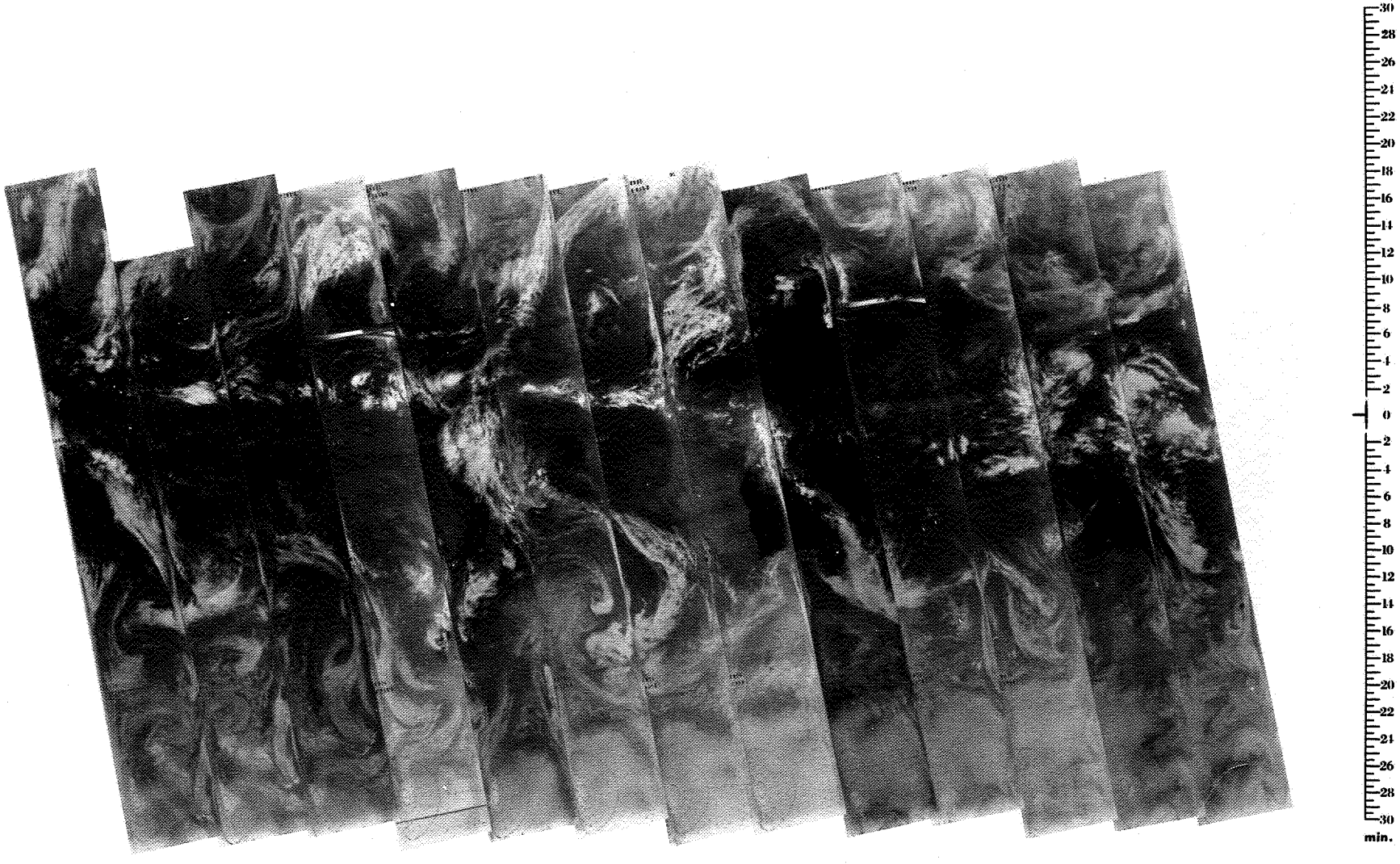
10 NOVEMBER 1973

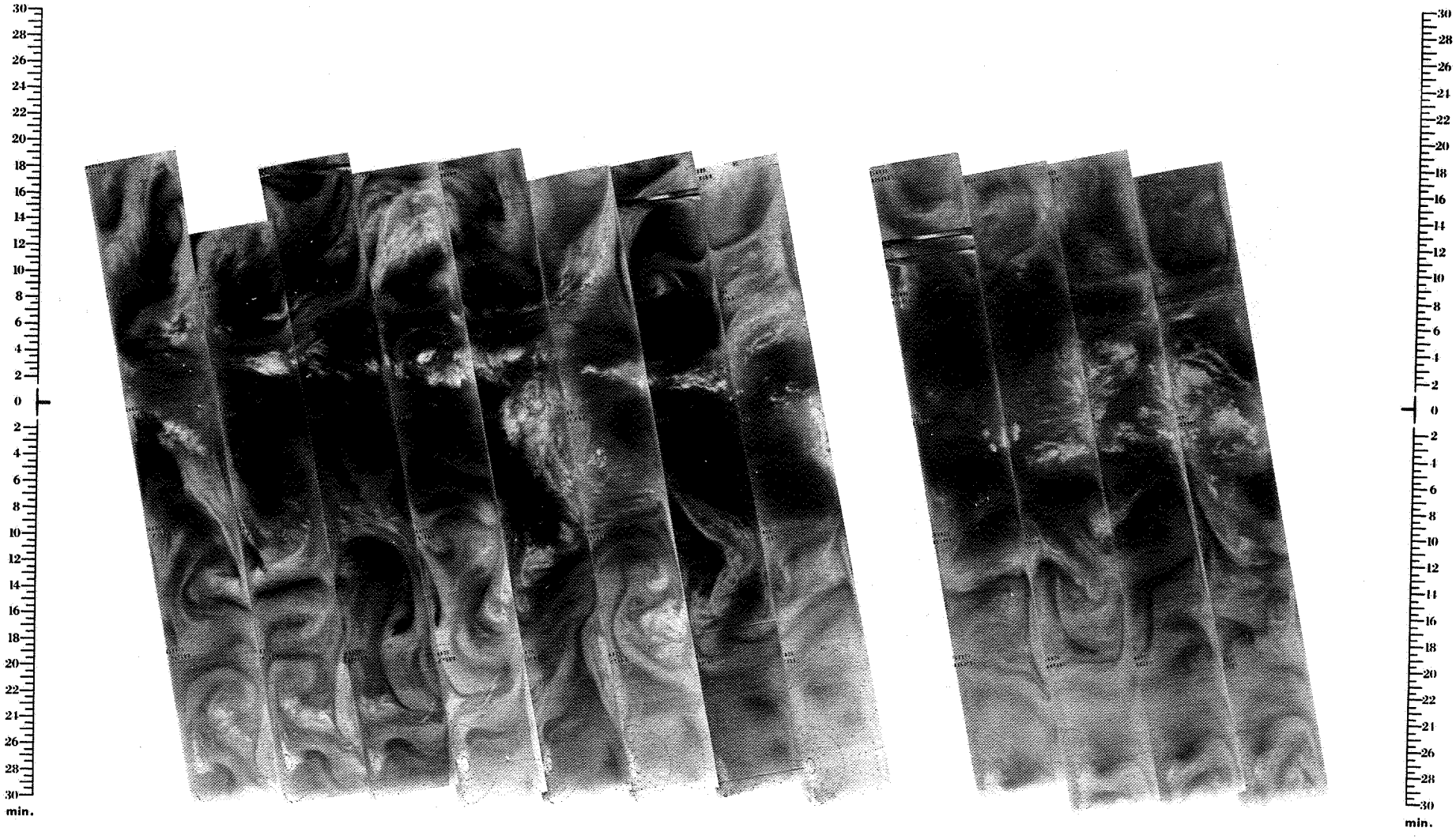
11.5 μm



10 NOVEMBER 1973

6.7 μm

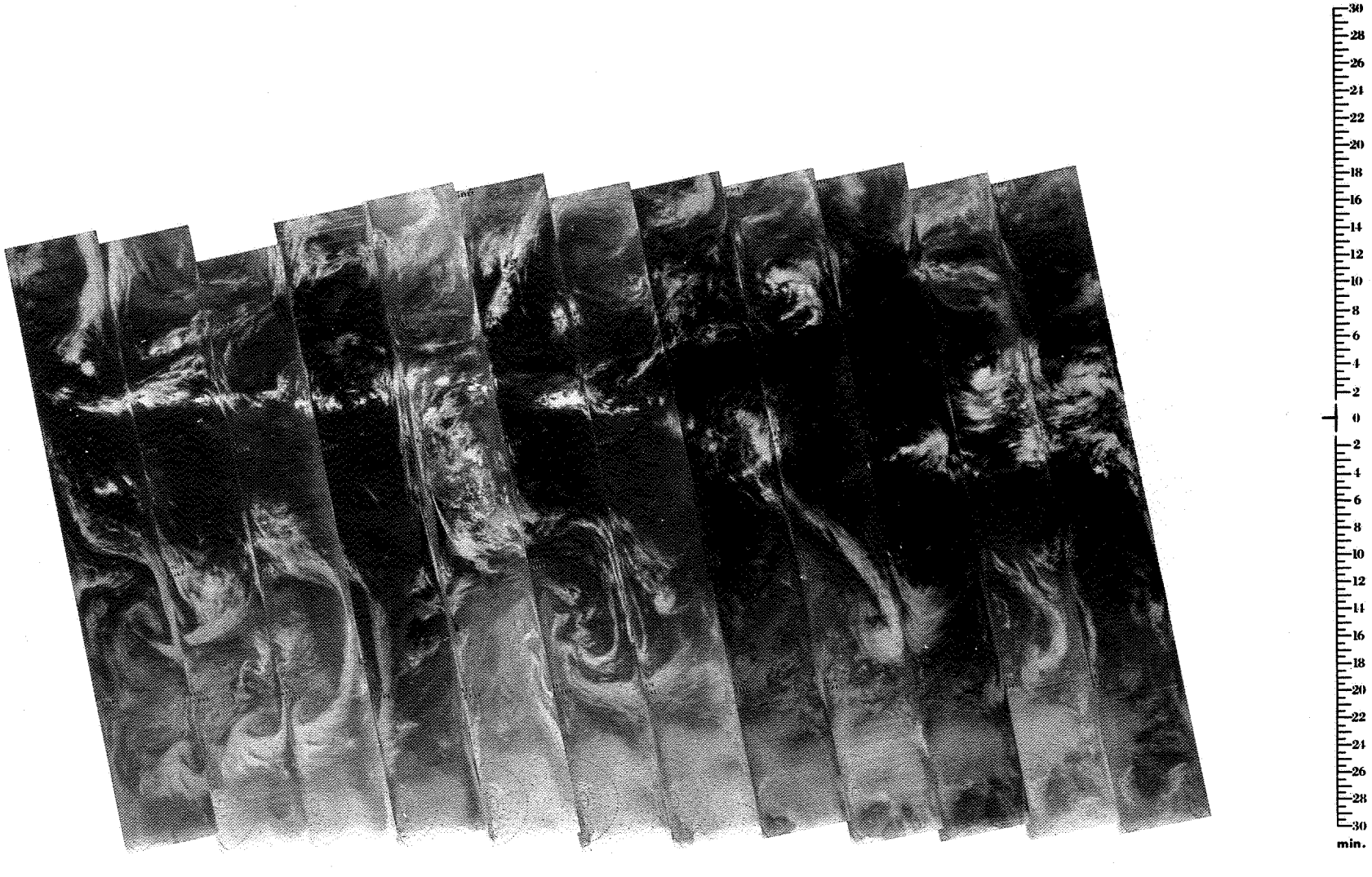

4506 4505 4504 4503 4502 4501 4500 4499 4498 4497 4496 4495 4494 4493
11 NOVEMBER 1973
11.5 μm
min.
min.



4506 4505 4504 4503 4502 4501 4500 4499 4498 4497 4496 4495 4494 4493

11 NOVEMBER 1973

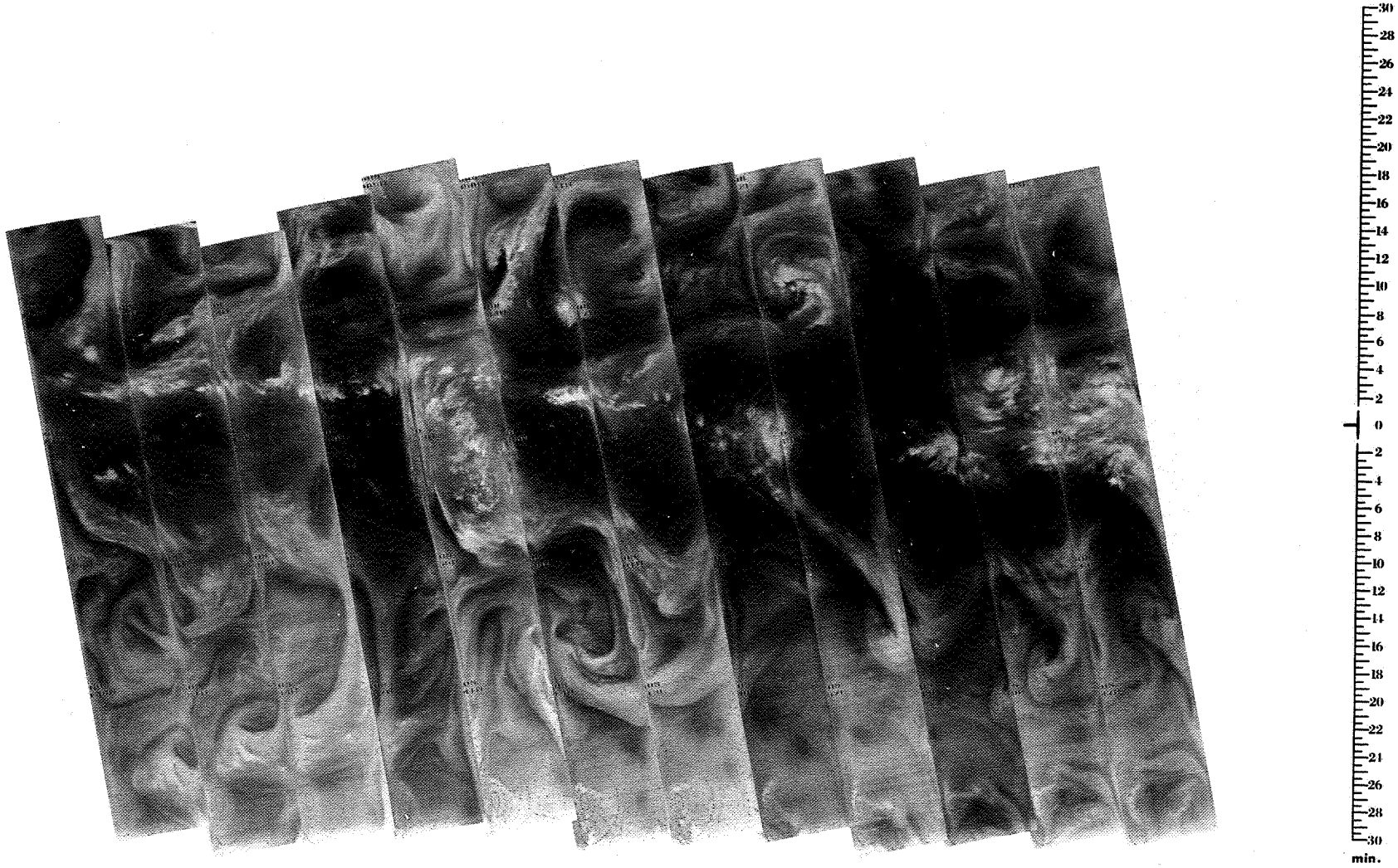
6.7 μm



4519 4518 4517 4516 4515 4514 4513 4512 4511 4510 4509 4508 4507

12 NOVEMBER 1973

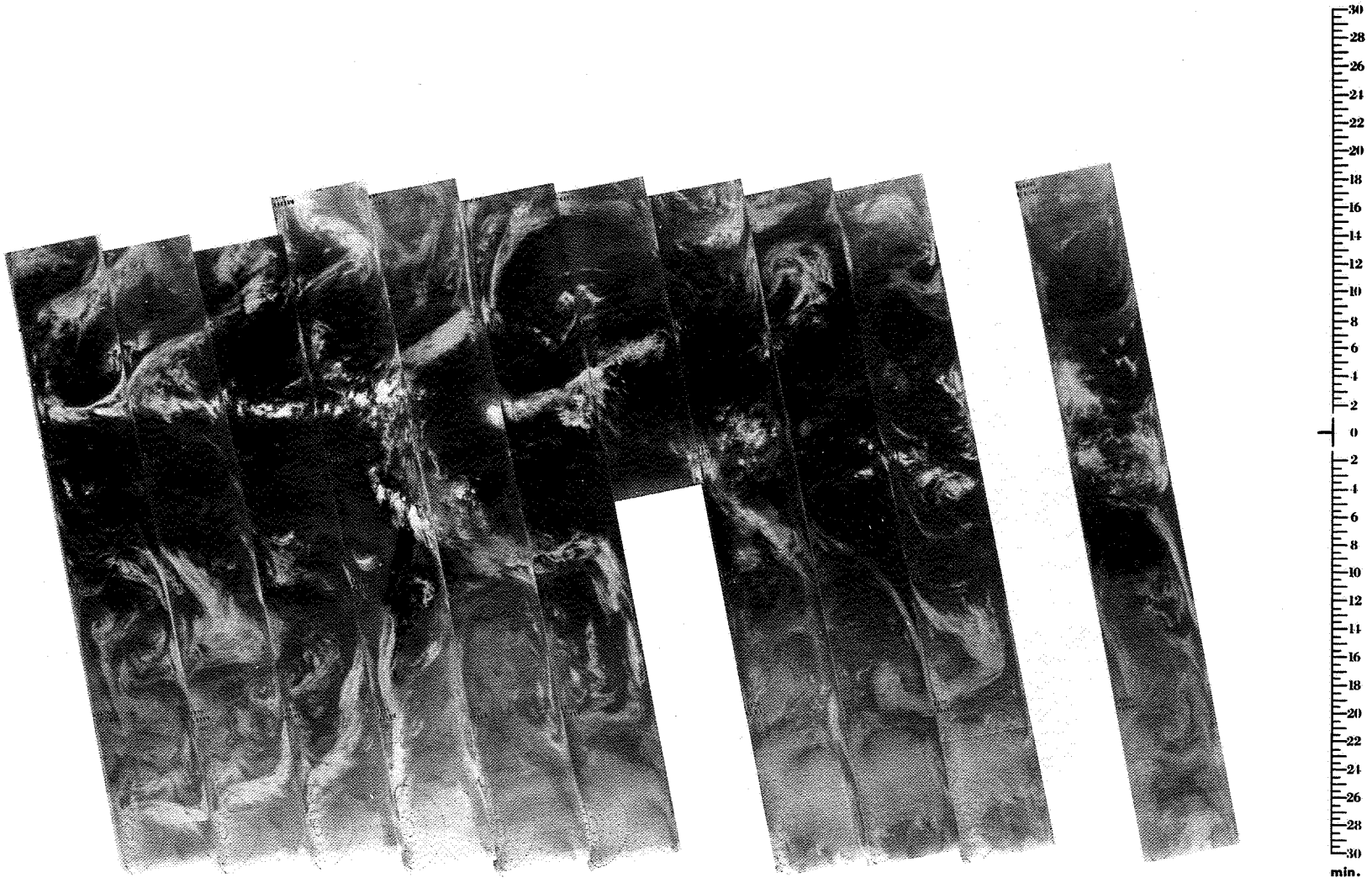
11.5 μm



4519 4518 4517 4516 4515 4514 4513 4512 4511 4510 4509 4508 4507

12 NOVEMBER 1973

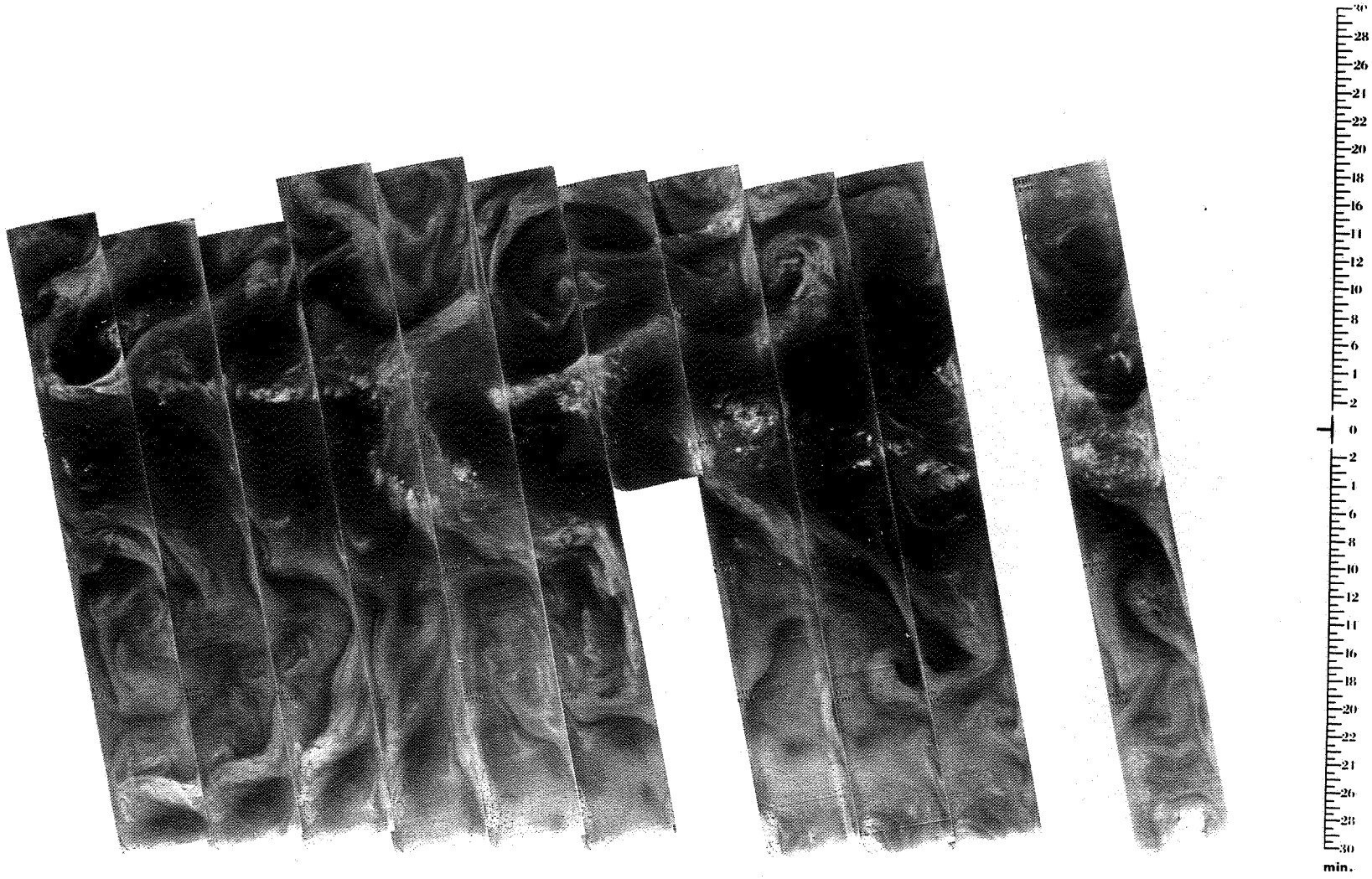
6.7 μm



4533 4532 4531 4530 4529 4528 4527 4526 4525 4524 4523 4522 4521 4520

13 NOVEMBER 1973

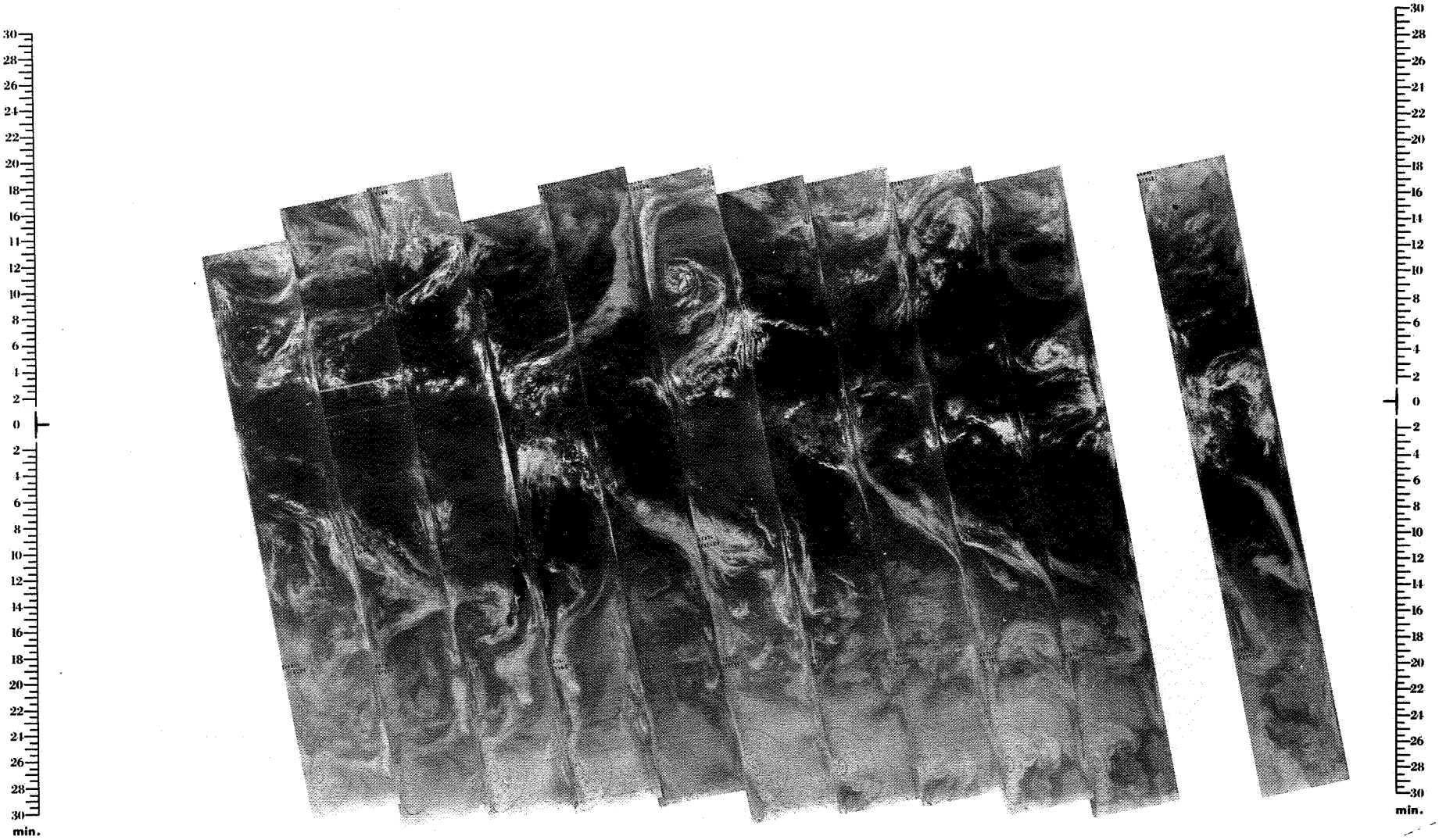
11.5 μm



4533 4532 4531 4530 4529 4528 4527 4526 4525 4524 4523 4522 4521 4520

13 NOVEMBER 1973

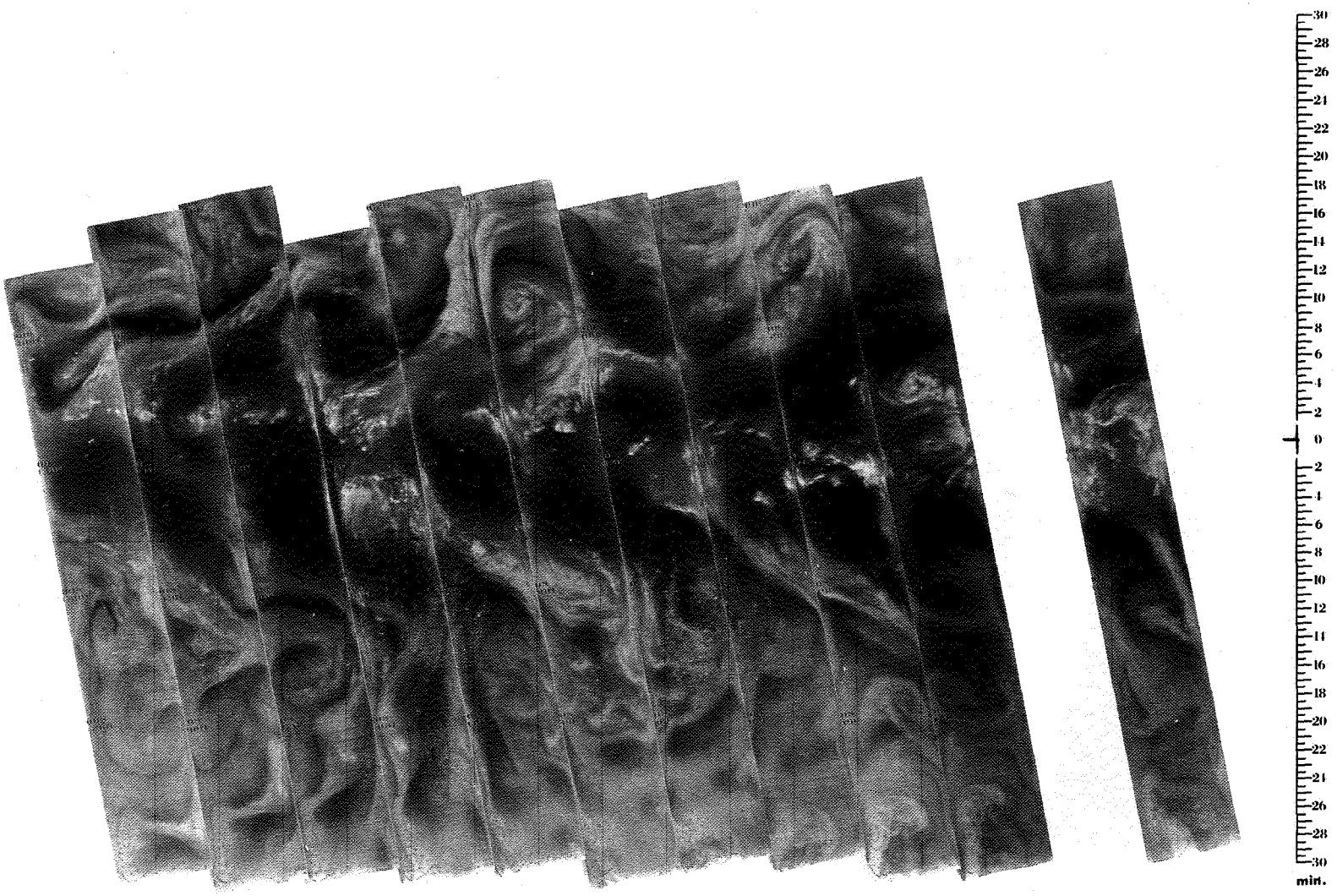
6.7 μm



4546 4545 4544 4543 4542 4541 4540 4539 4538 4537 4536 4535 4534

14 NOVEMBER 1973

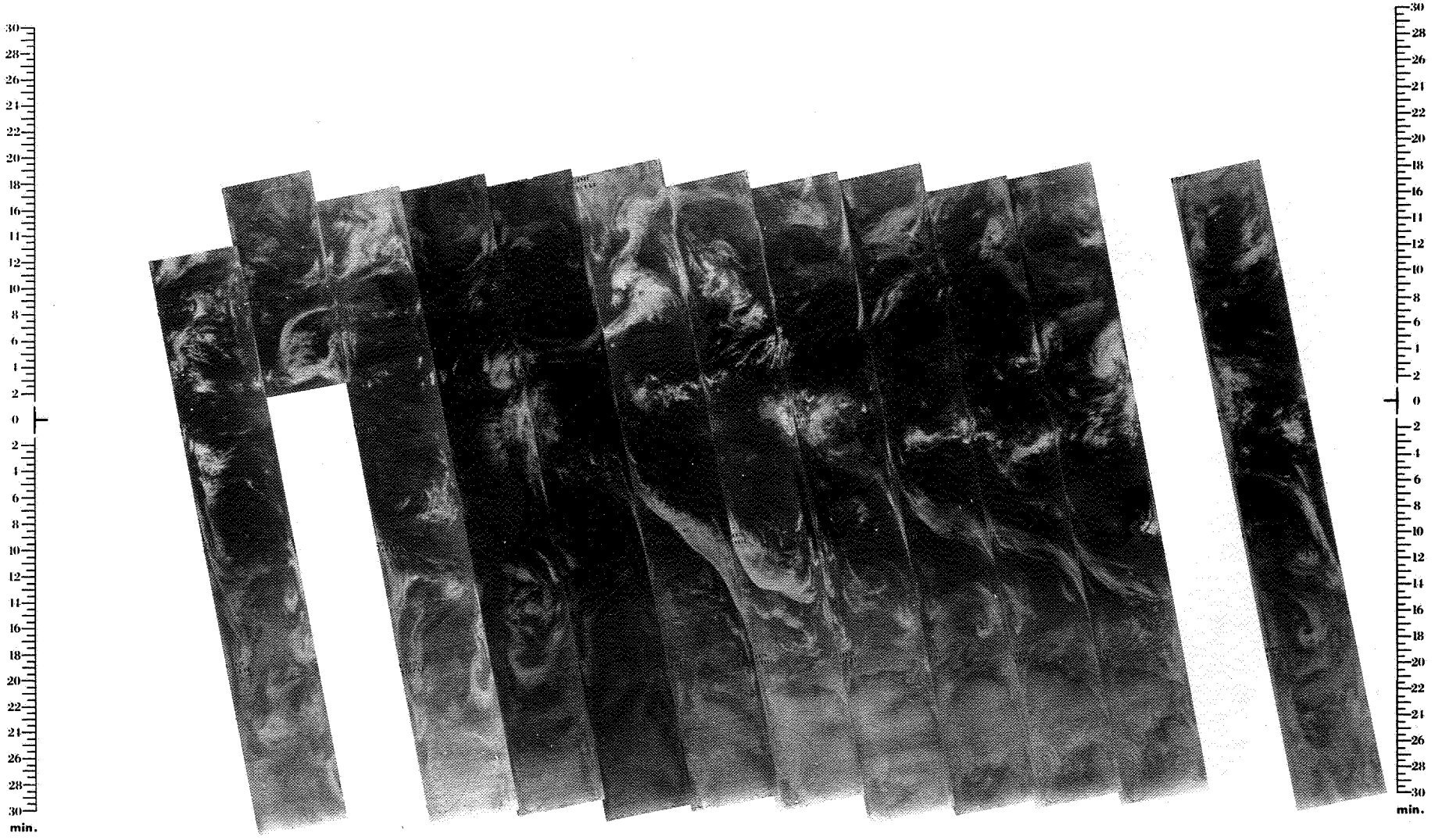
11.5 μm



4546 4545 4544 4543 4542 4541 4540 4539 4538 4537 4536 4535 4534

14 NOVEMBER 1973

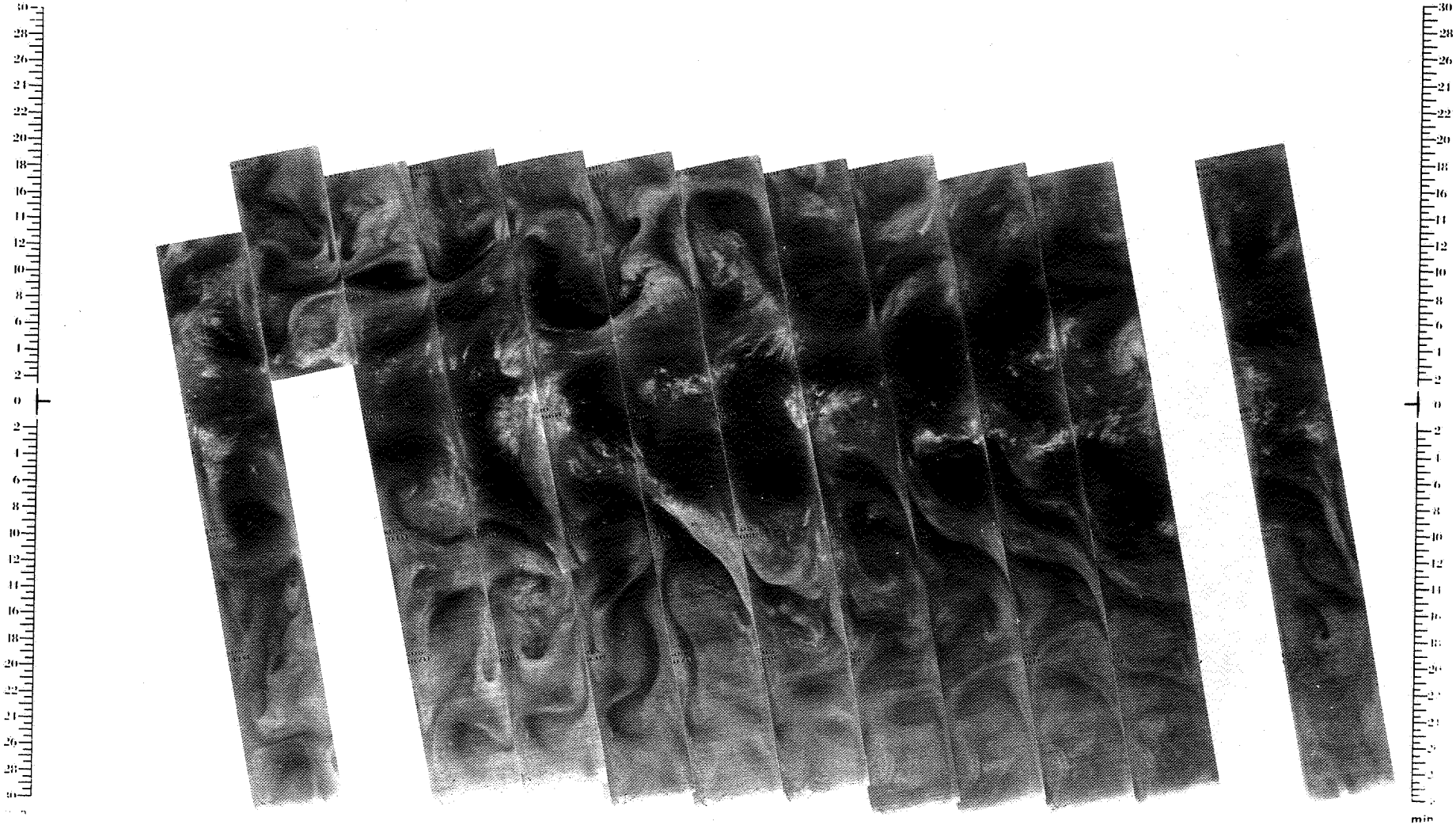
6.7 μm



4559 4558 4557 4556 4555 4554 4553 4552 4551 4550 4549 4548 4547

15 NOVEMBER 1973

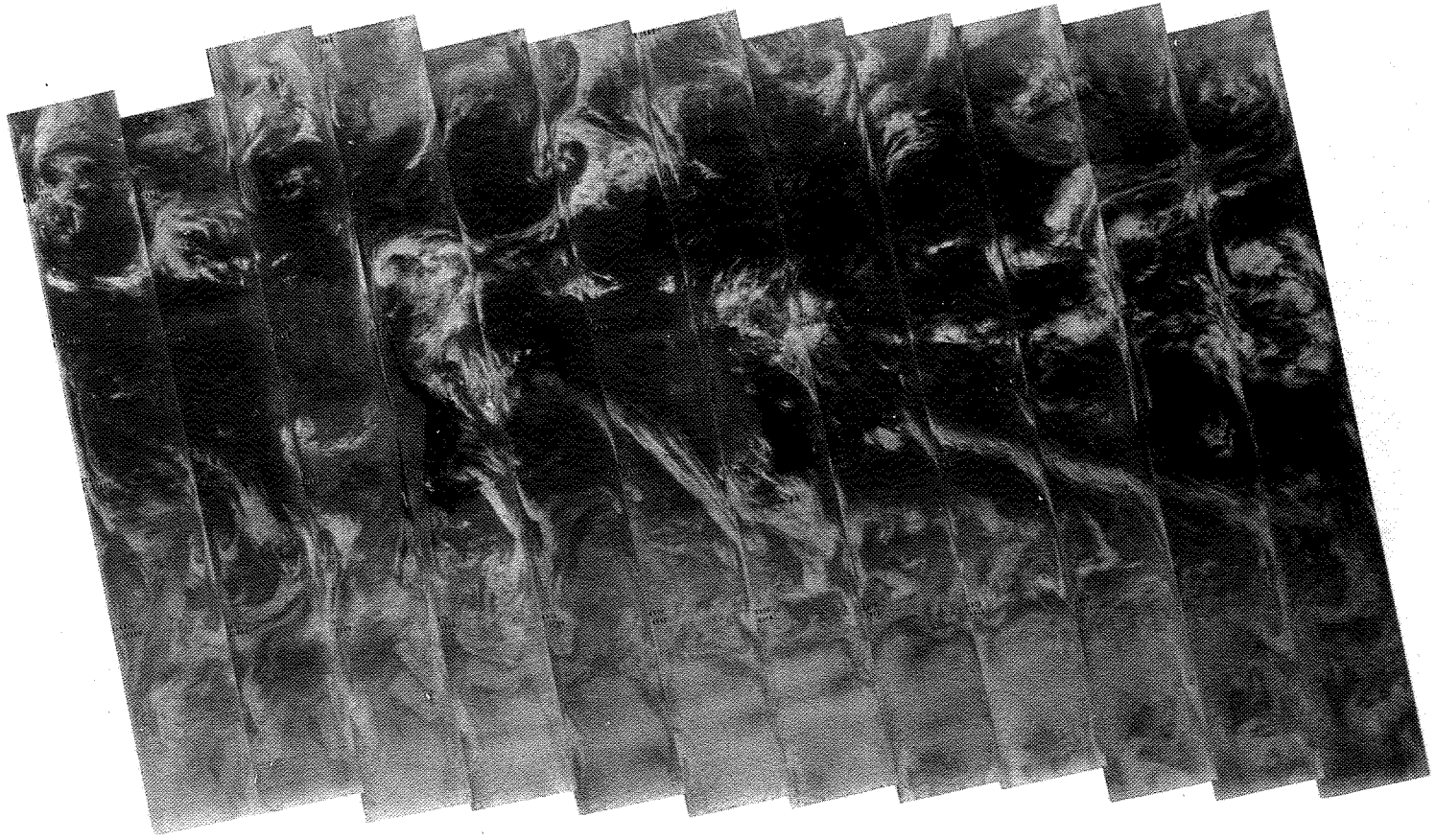
11.5 μm



4559 4558 4557 4556 4555 4554 4553 4552 4551 4550 4549 4548 4547

15 NOVEMBER 1973

6.7 μm

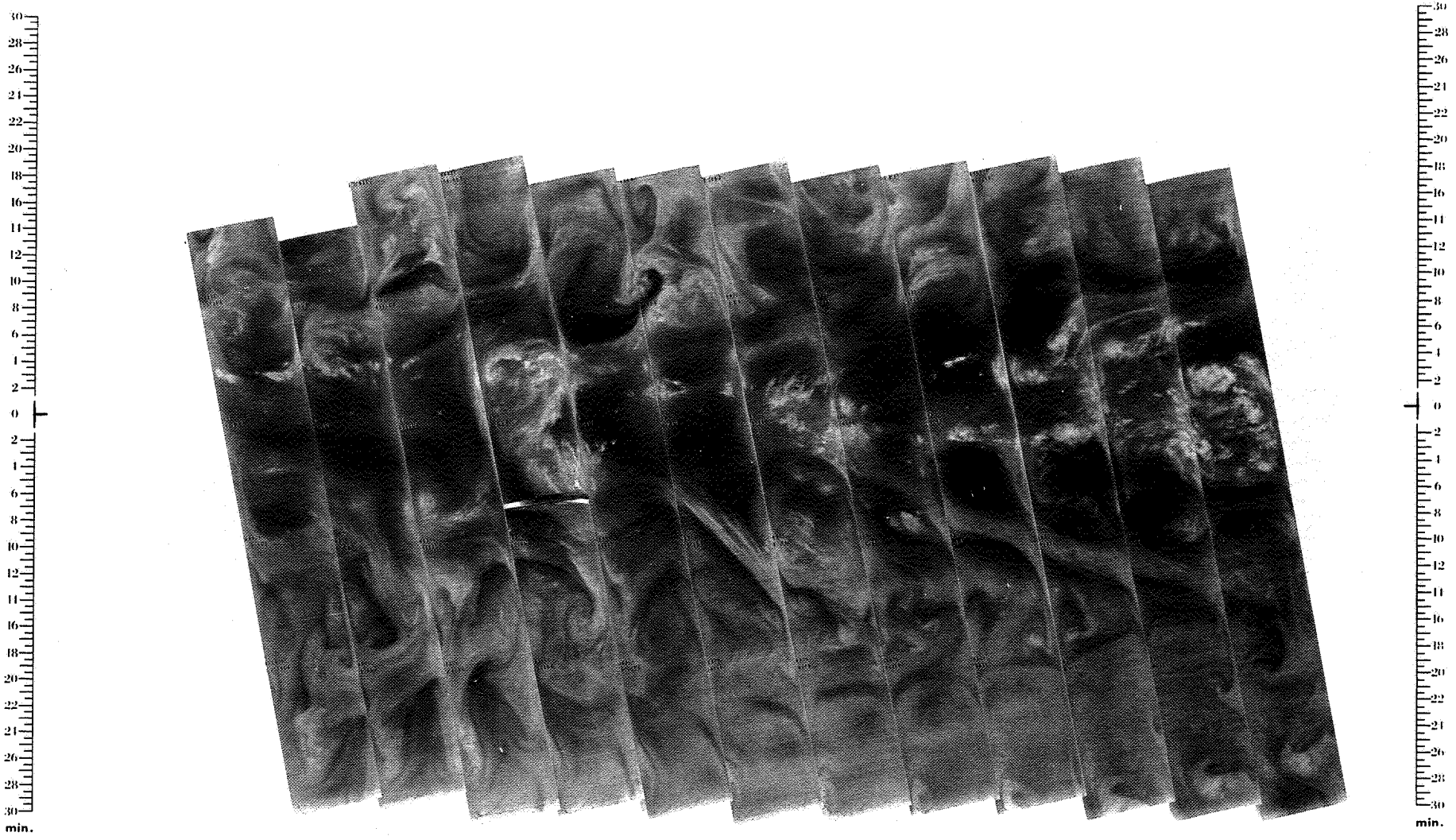


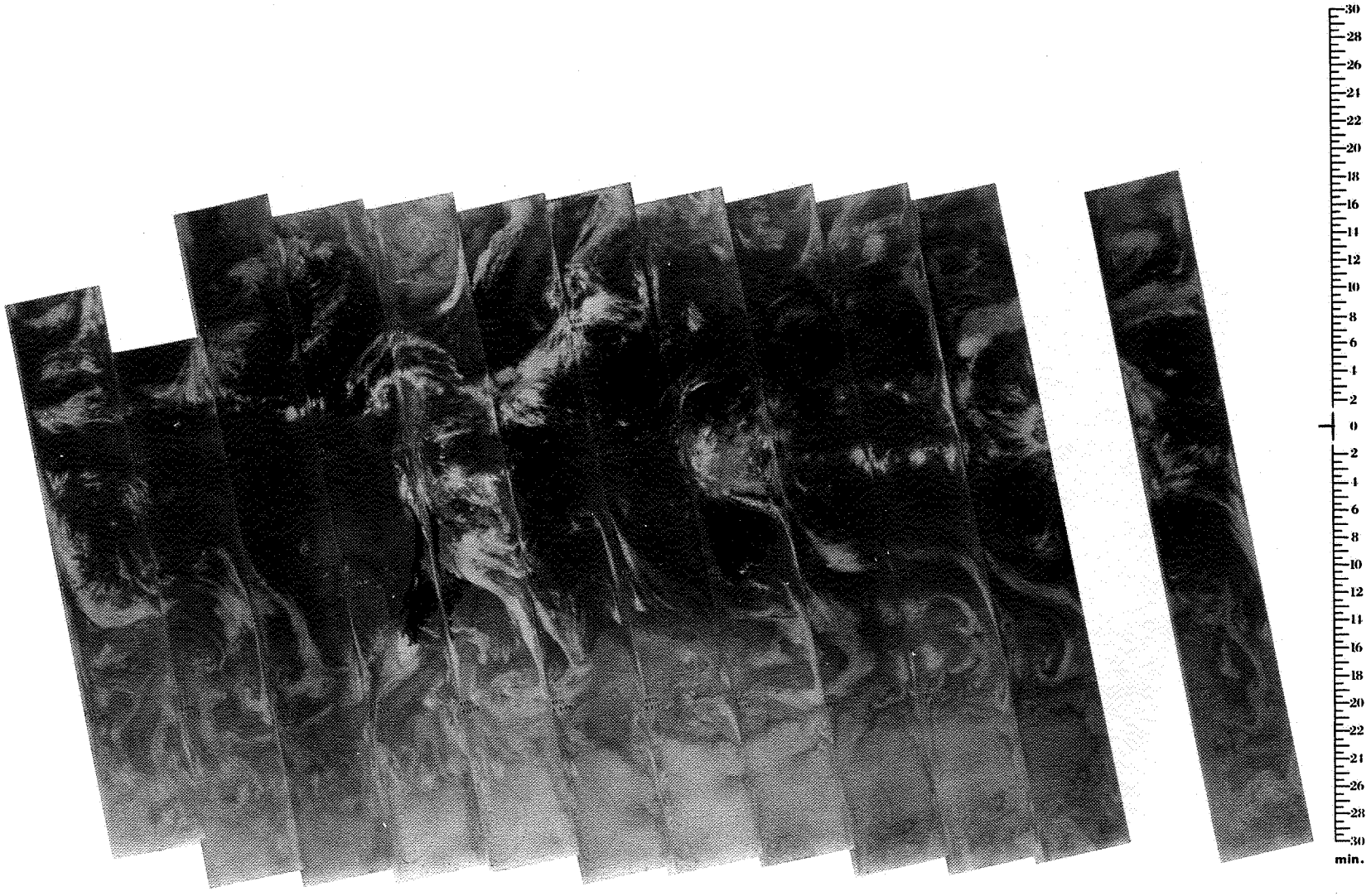
4573 4572 4571 4570 4569 4568 4567 4566 4565 4564 4563 4562 4561 4560

16 NOVEMBER 1973

11.5 μm

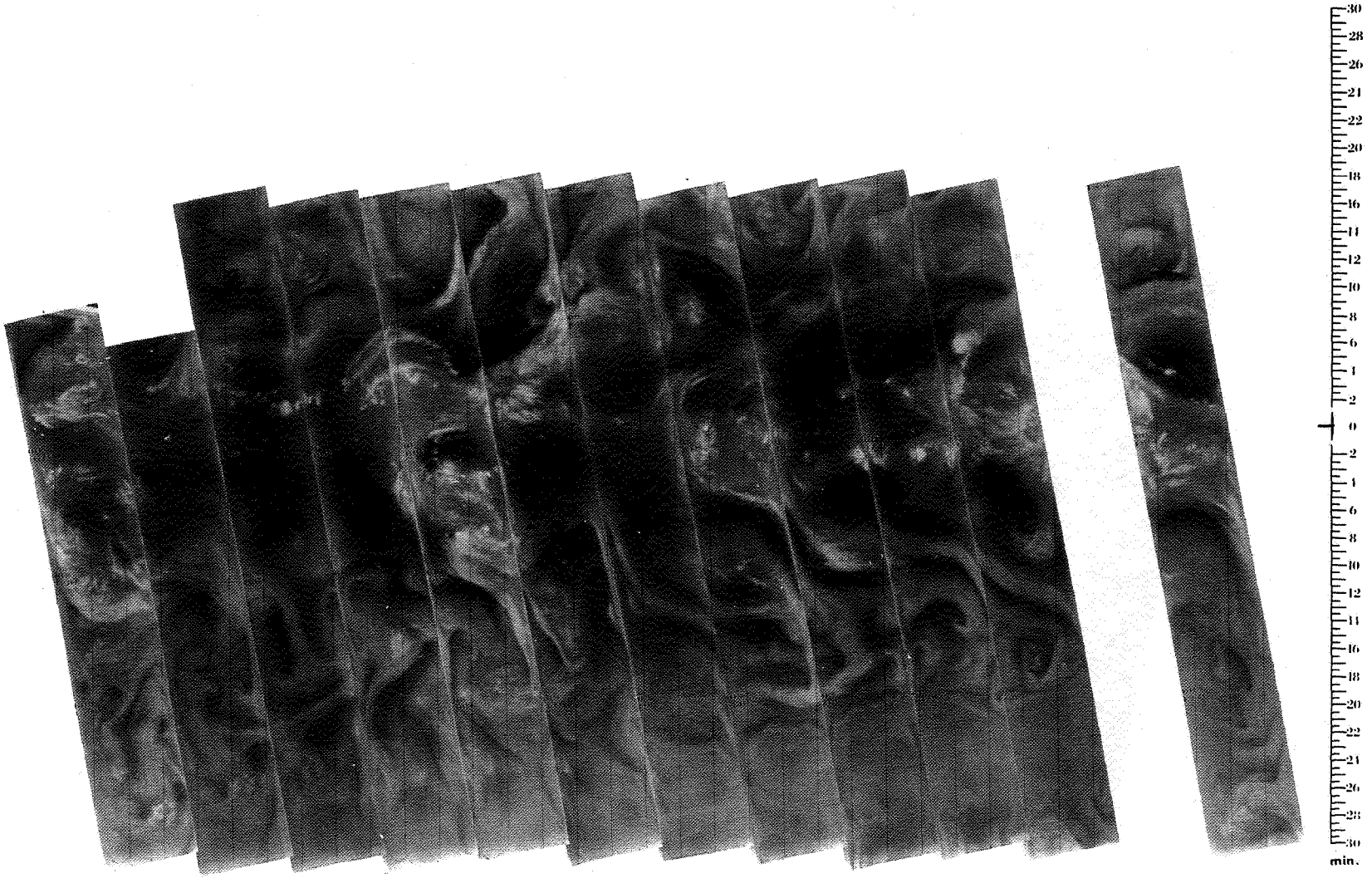
4-220


min.
min.
4573 4572 4571 4570 4569 4568 4567 4566 4565 4564 4563 4562 4561 4560
16 NOVEMBER 1973
6.7 μm



17 NOVEMBER 1973

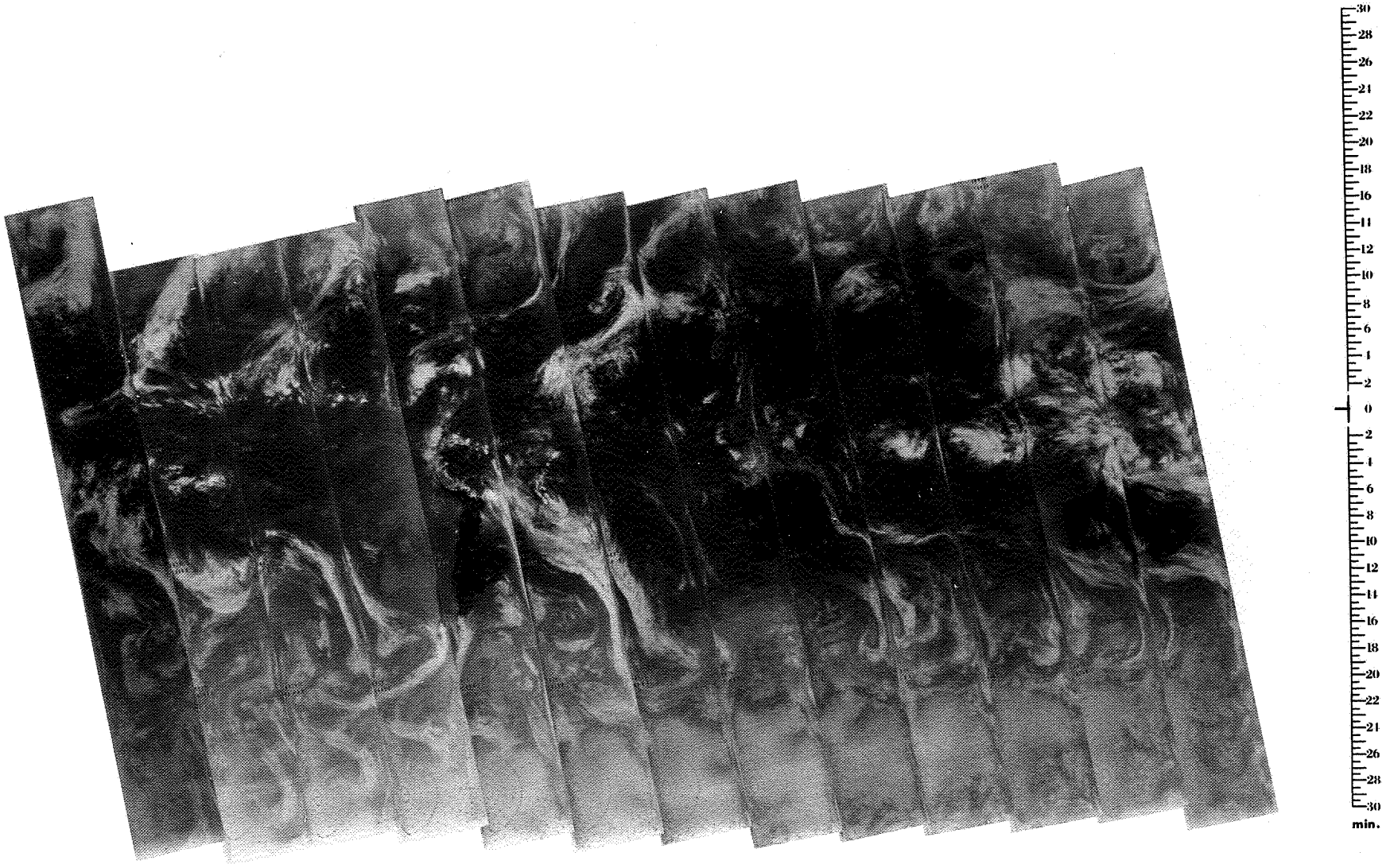
11.5 μm



4586 4585 4584 4583 4582 4581 4580 4579 4578 4577 4576 4575 4574

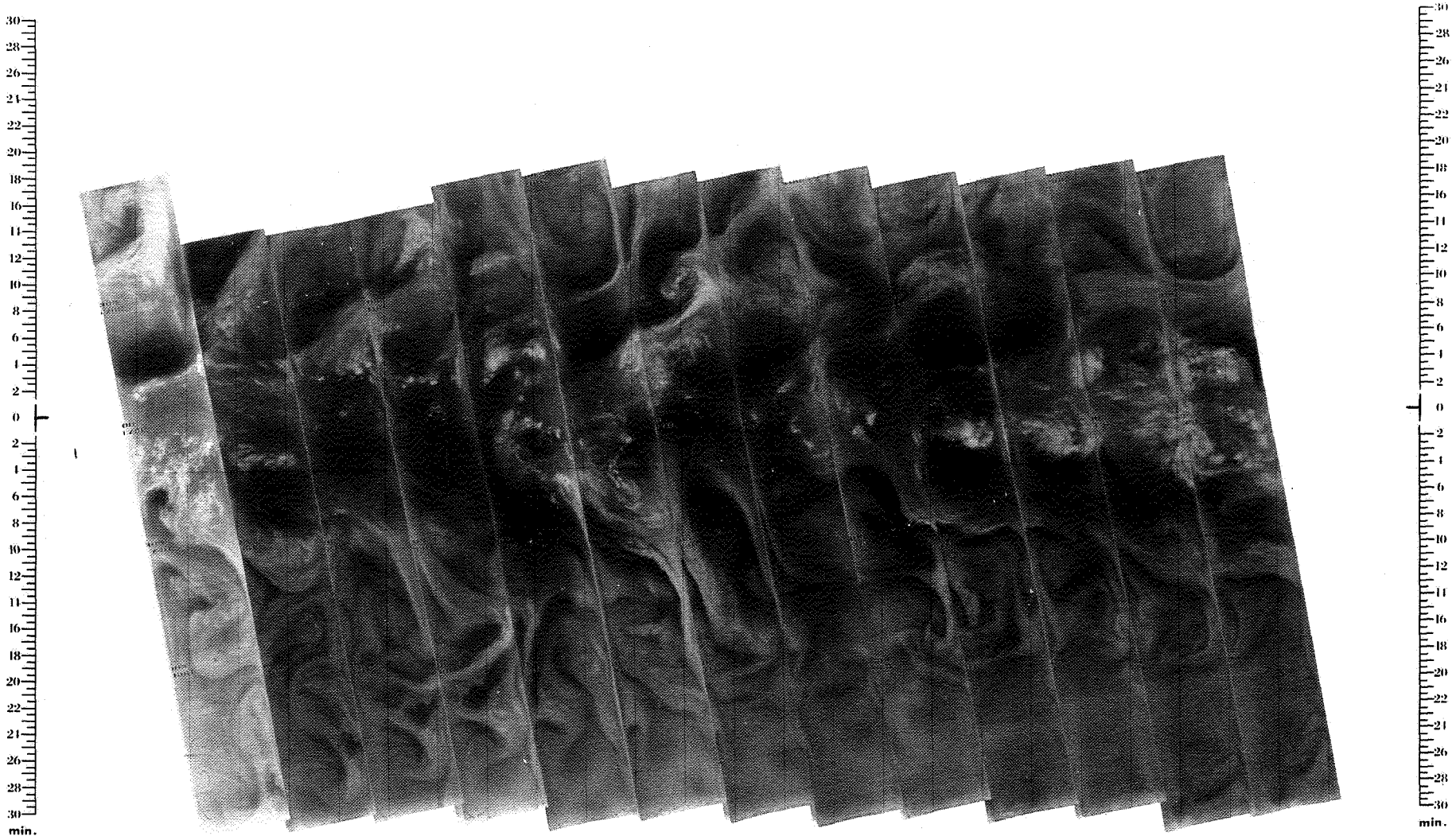
17 NOVEMBER 1973

6.7 μm



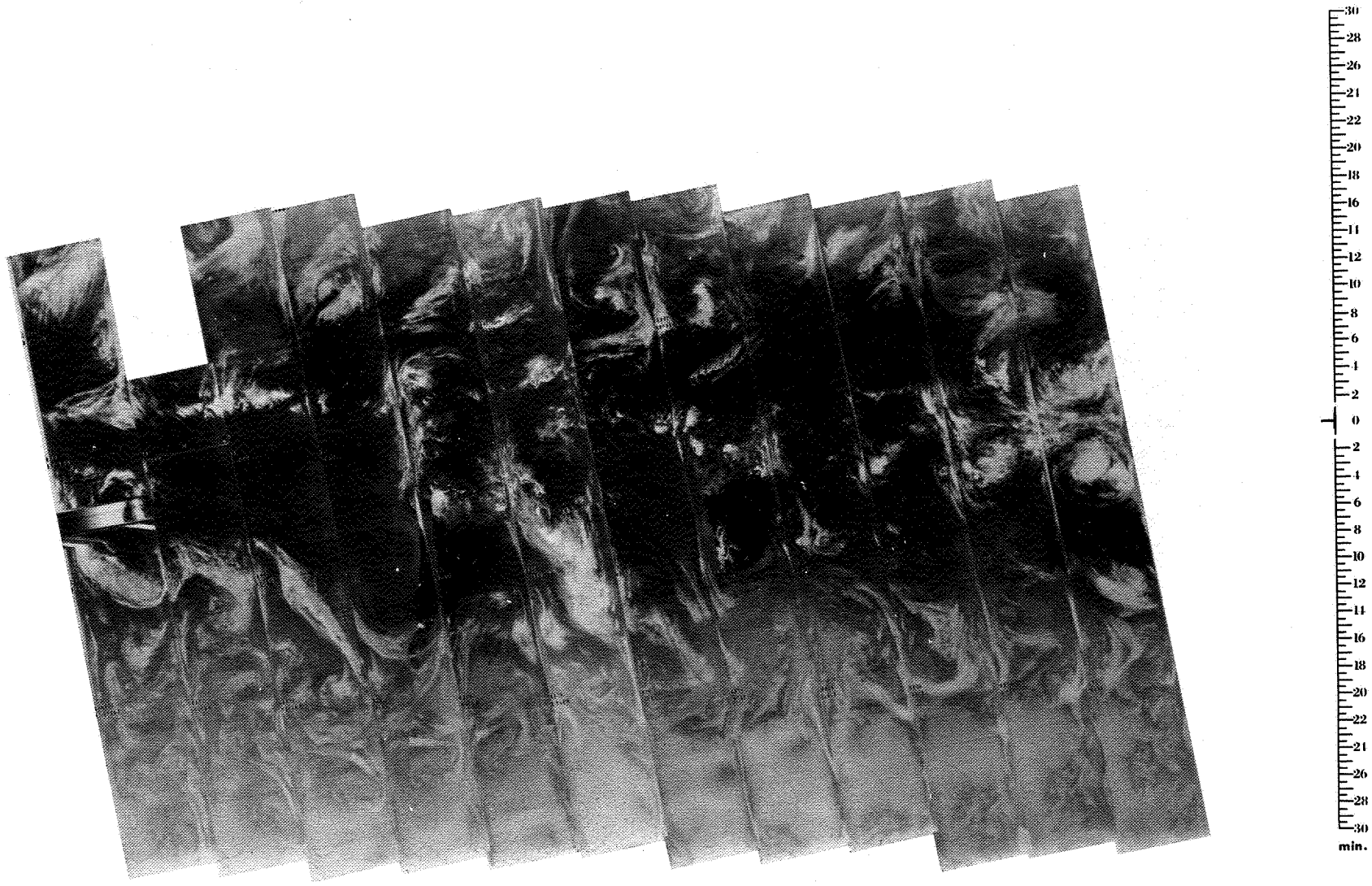
18 NOVEMBER 1973

11.5 μm



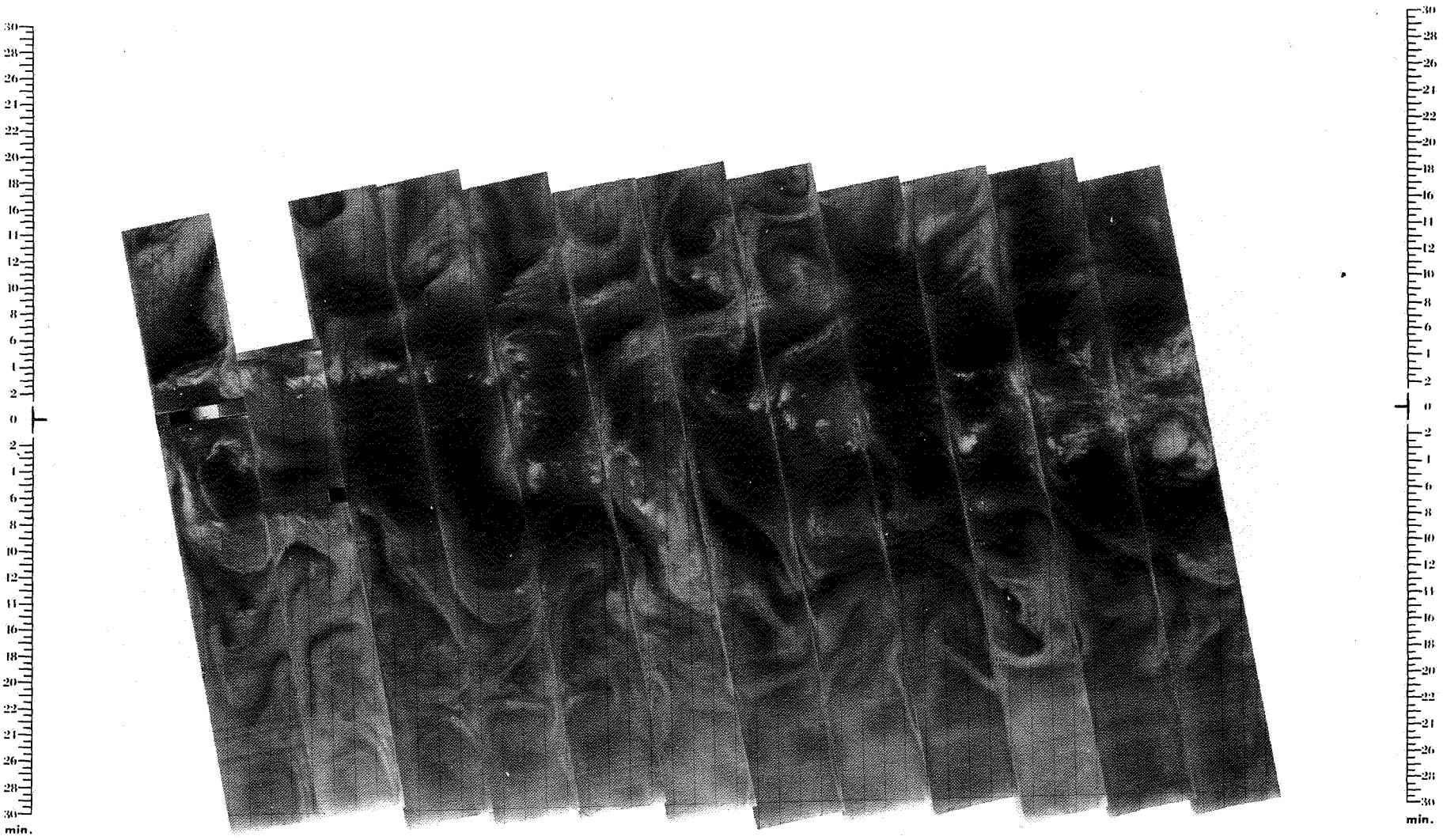
18 NOVEMBER 1973

6.7 μm



19 NOVEMBER 1973

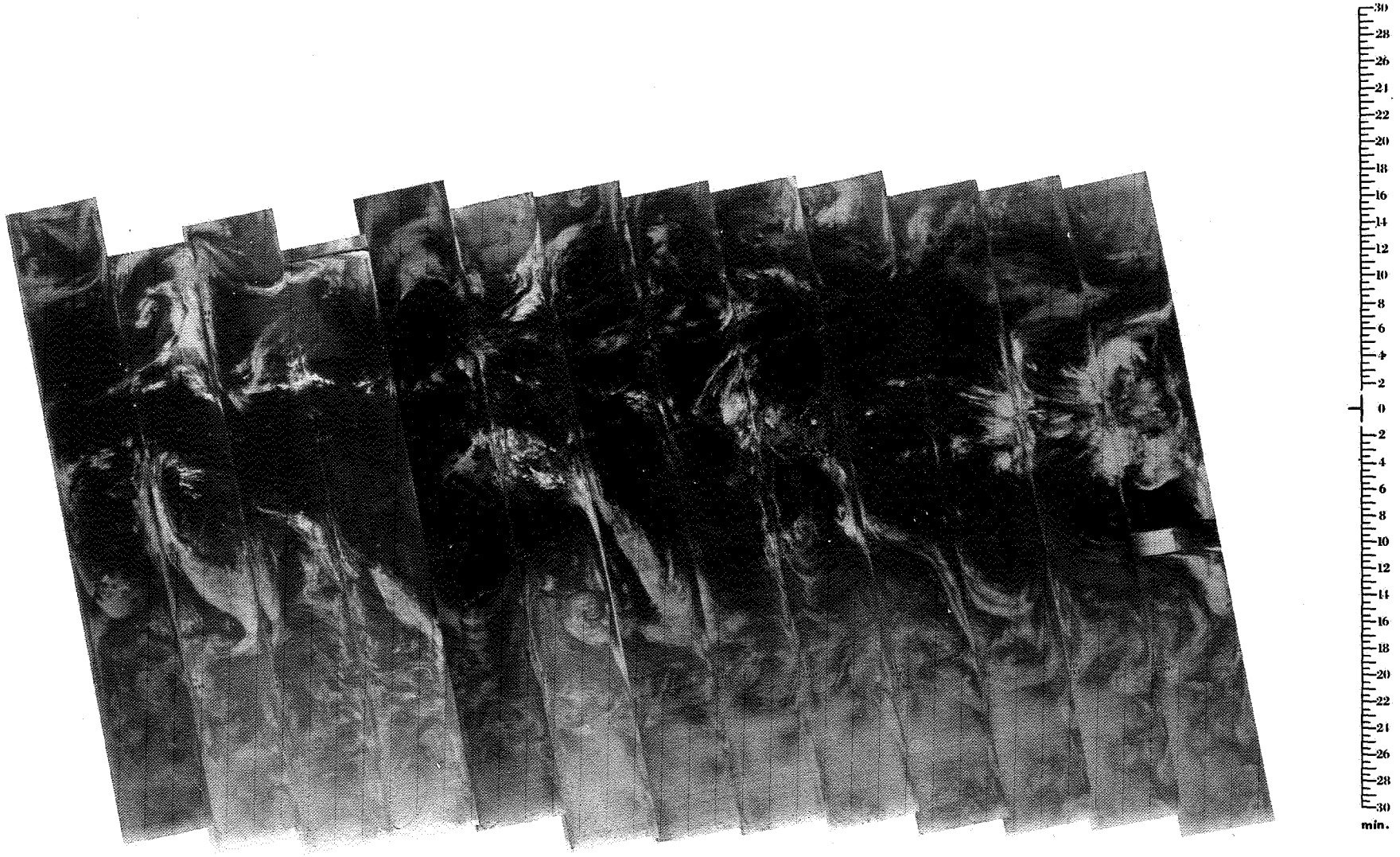
11.5 μm



4613 4612 4611 4610 4609 4608 4607 4606 4605 4604 4603 4602 4601

19 NOVEMBER 1973

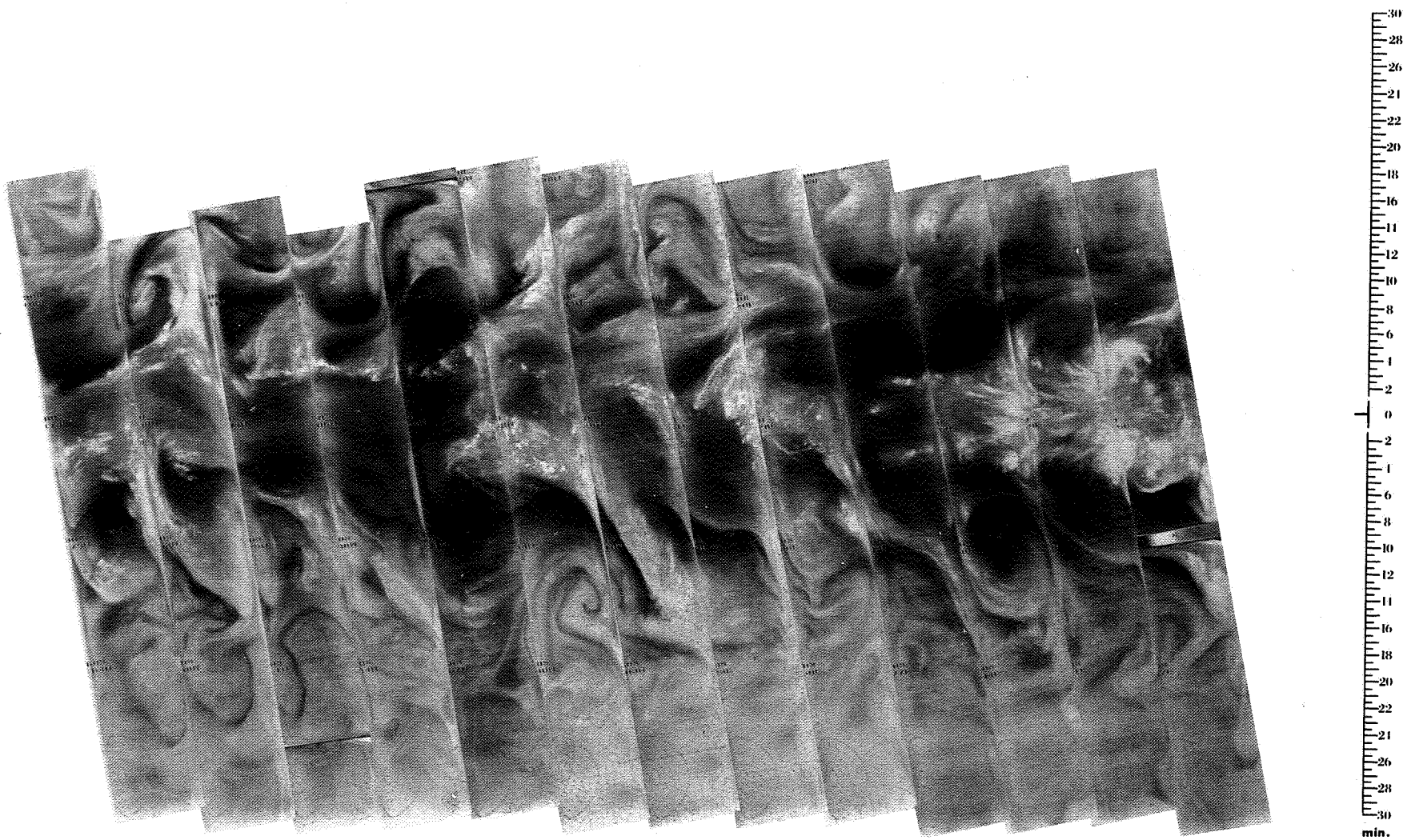
6.7 μm

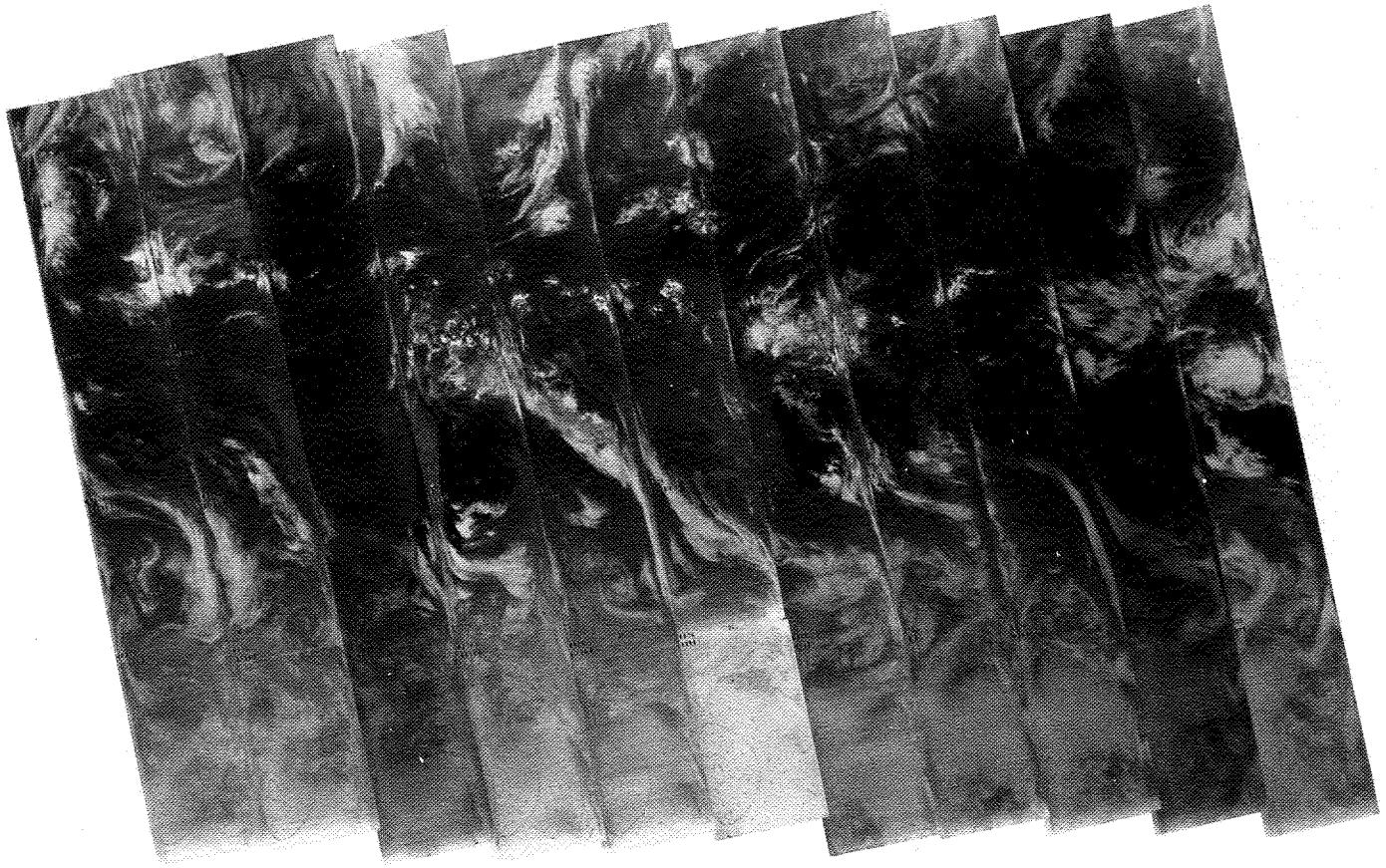


4627 4626 4625 4624 4623 4622 4621 4620 4619 4618 4617 4616 4615 4614

20 NOVEMBER 1973

11.5 μm

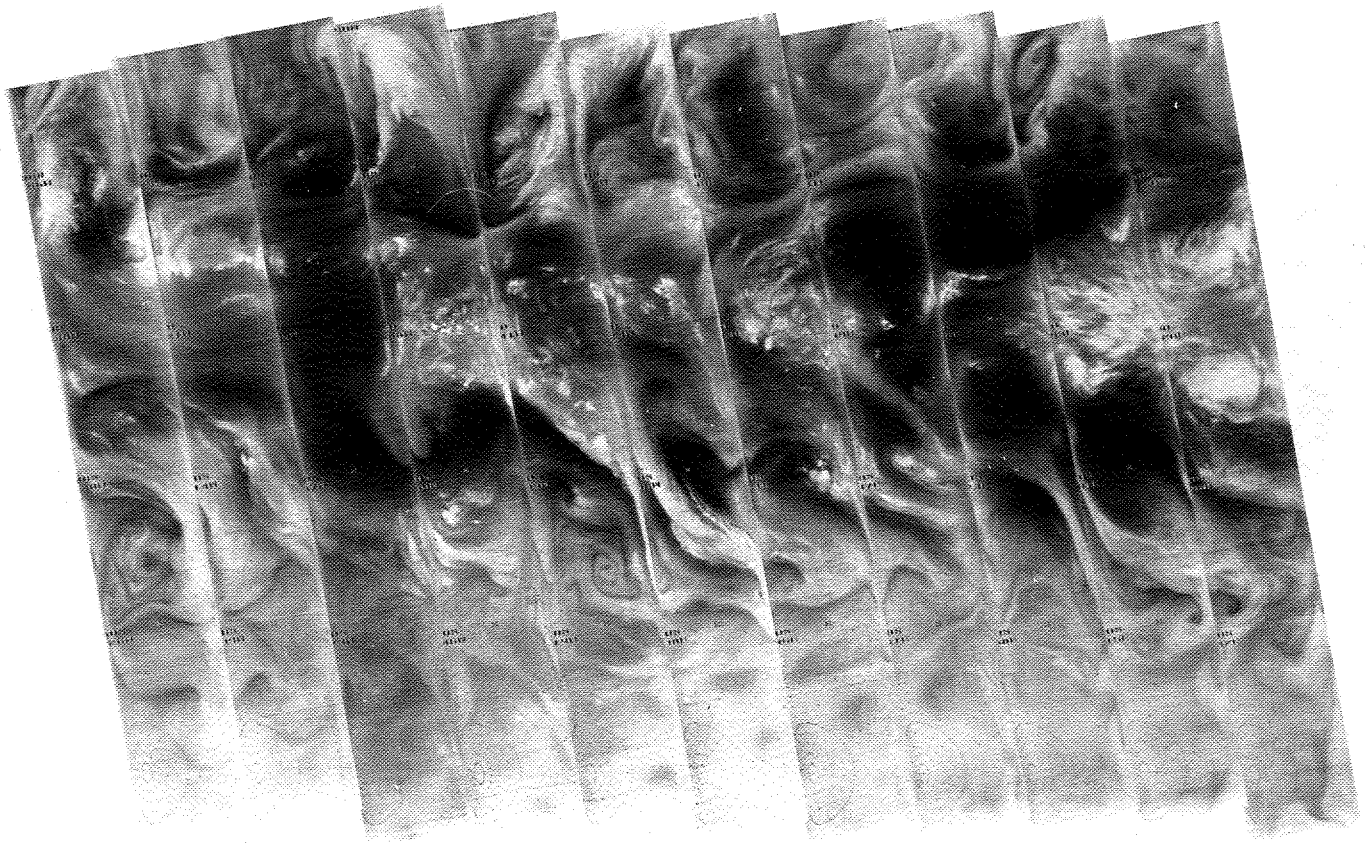

min.
min.
4627 4626 4625 4624 4623 4622 4621 4620 4619 4618 4617 4616 4615 4614
20 NOVEMBER 1973
6.7 μm



4640 4639 4638 4637 4636 4635 4634 4633 4632 4631 4630 4629 4628

21 NOVEMBER 1973

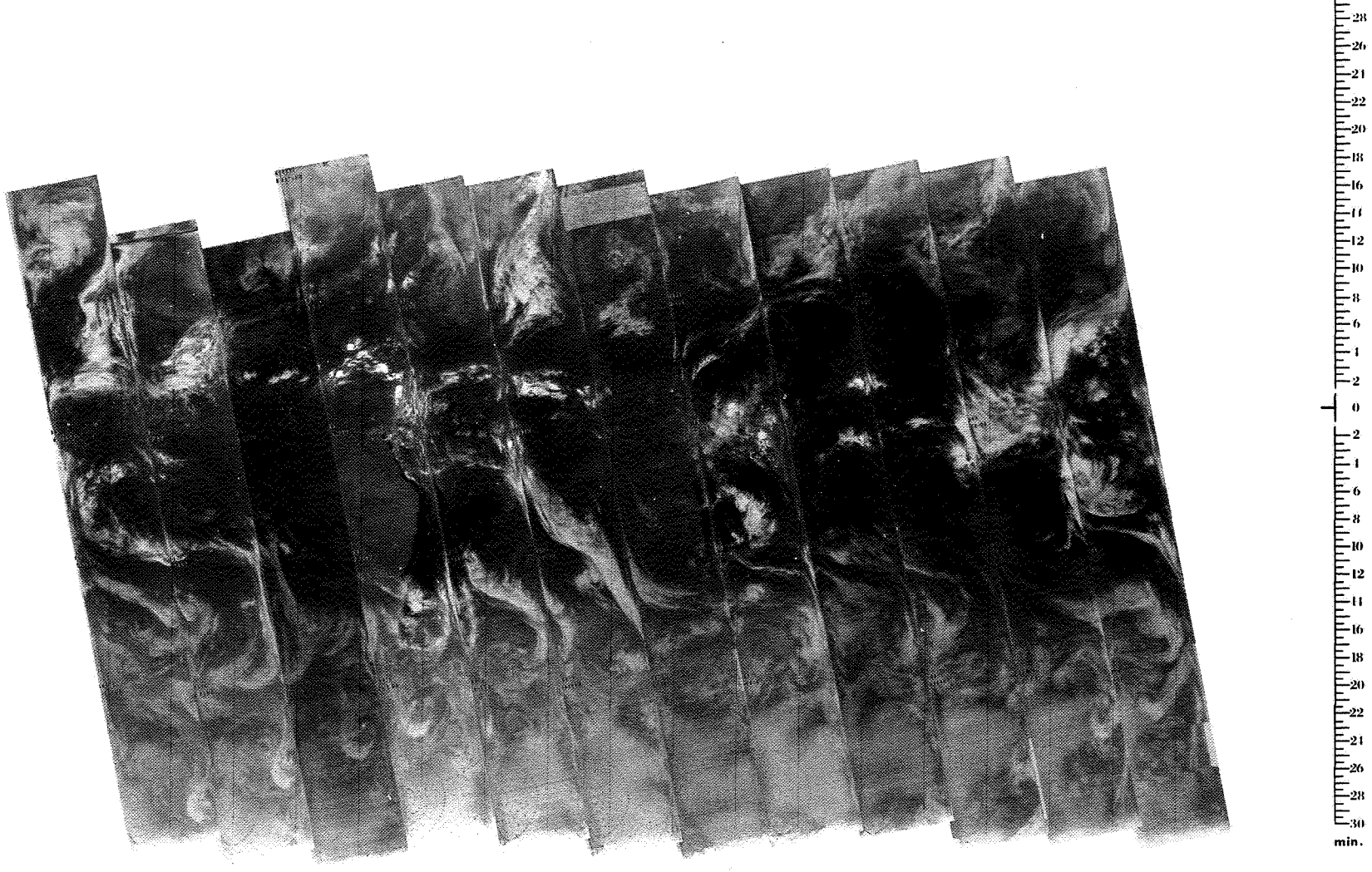
11.5 μm



4640 4639 4638 4637 4636 4635 4634 4633 4632 4631 4630 4629 4628

21 NOVEMBER 1973

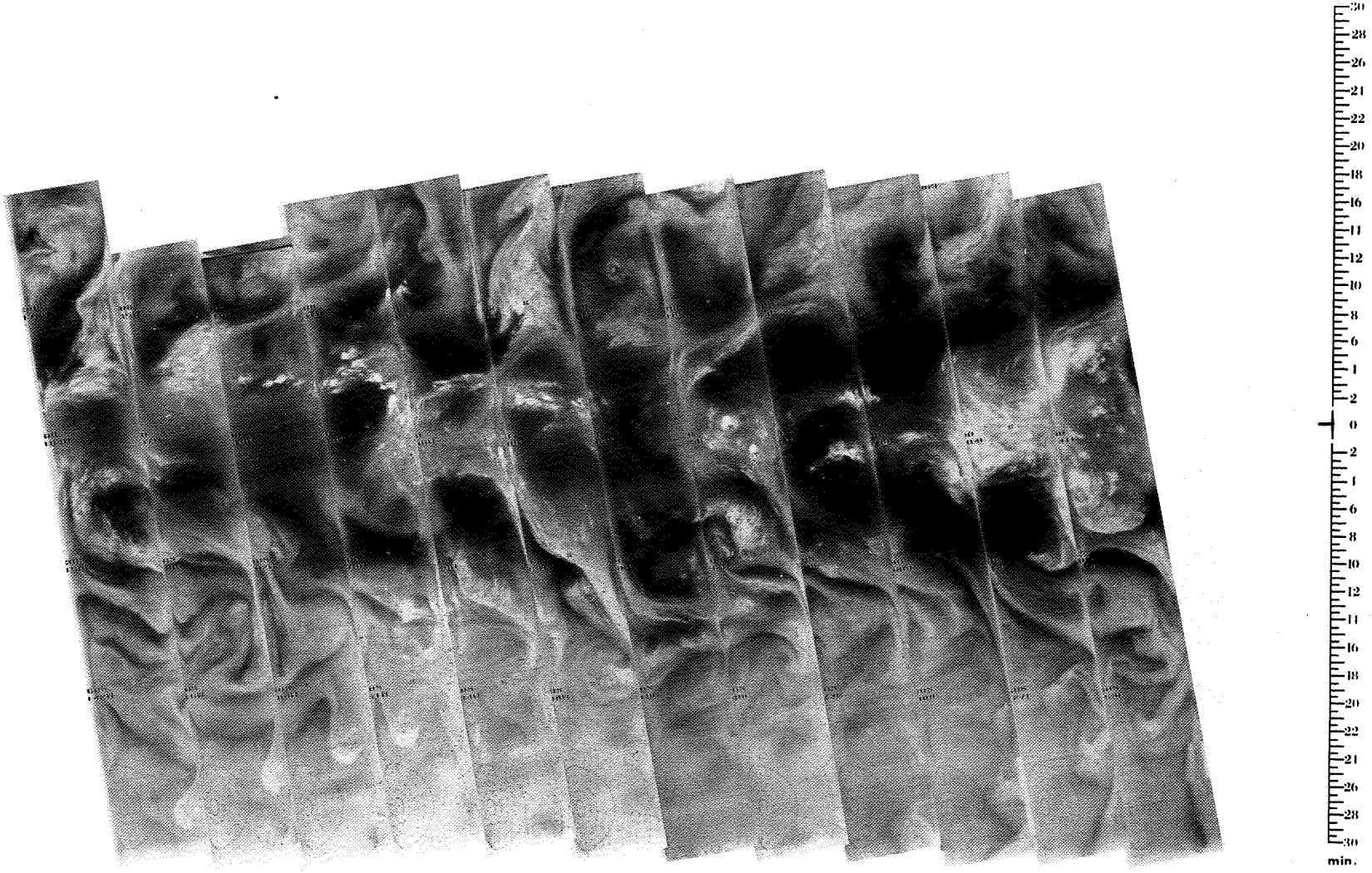
6.7 μm



4653 4652 4651 4650 4649 4648 4647 4646 4645 4644 4643 4642 4641

22 NOVEMBER 1973

11.5 μm

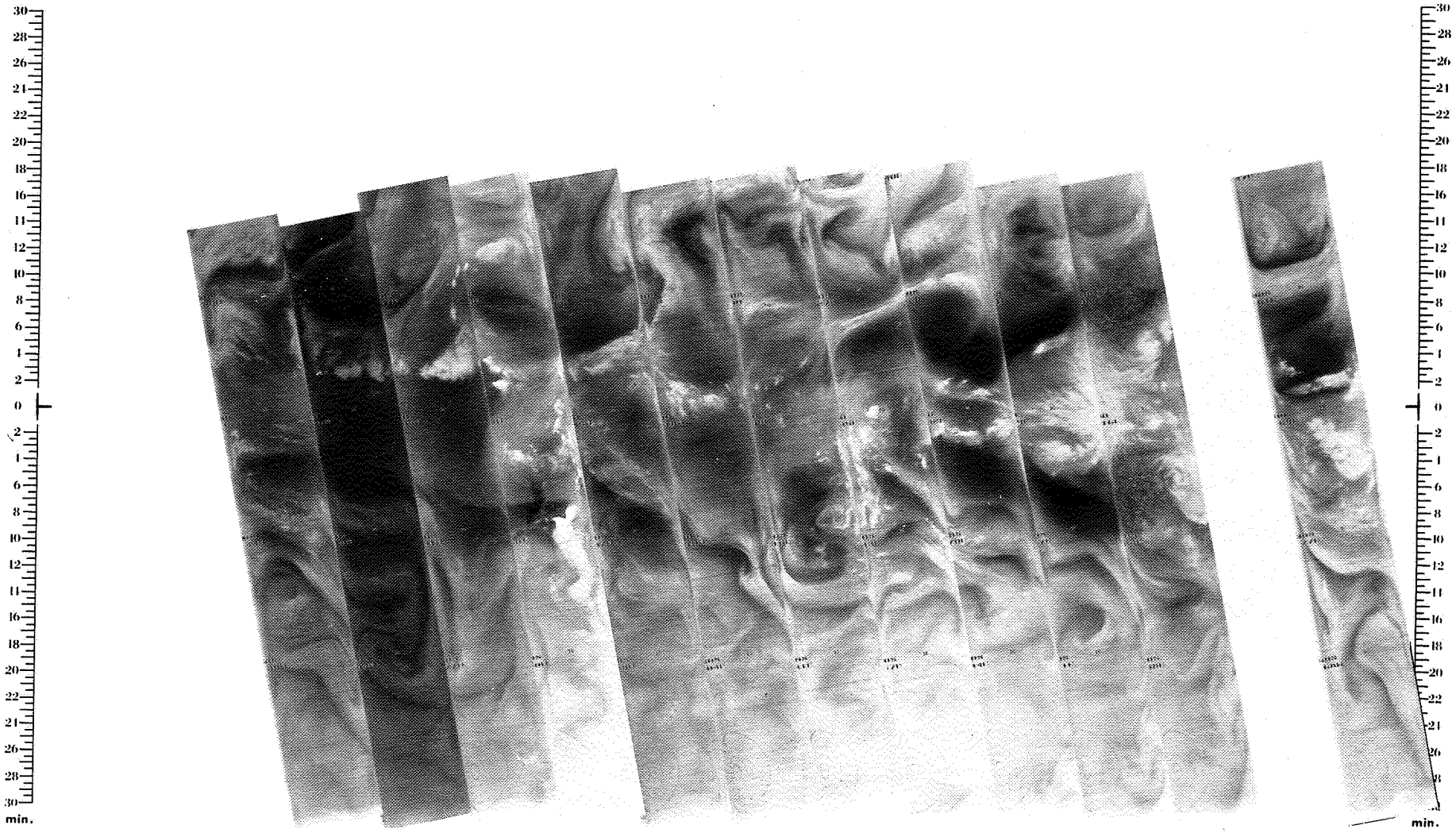


4653 4652 4651 4650 4649 4648 4647 4646 4645 4644 4643 4642 4641

22 NOVEMBER 1973

6.7 μm

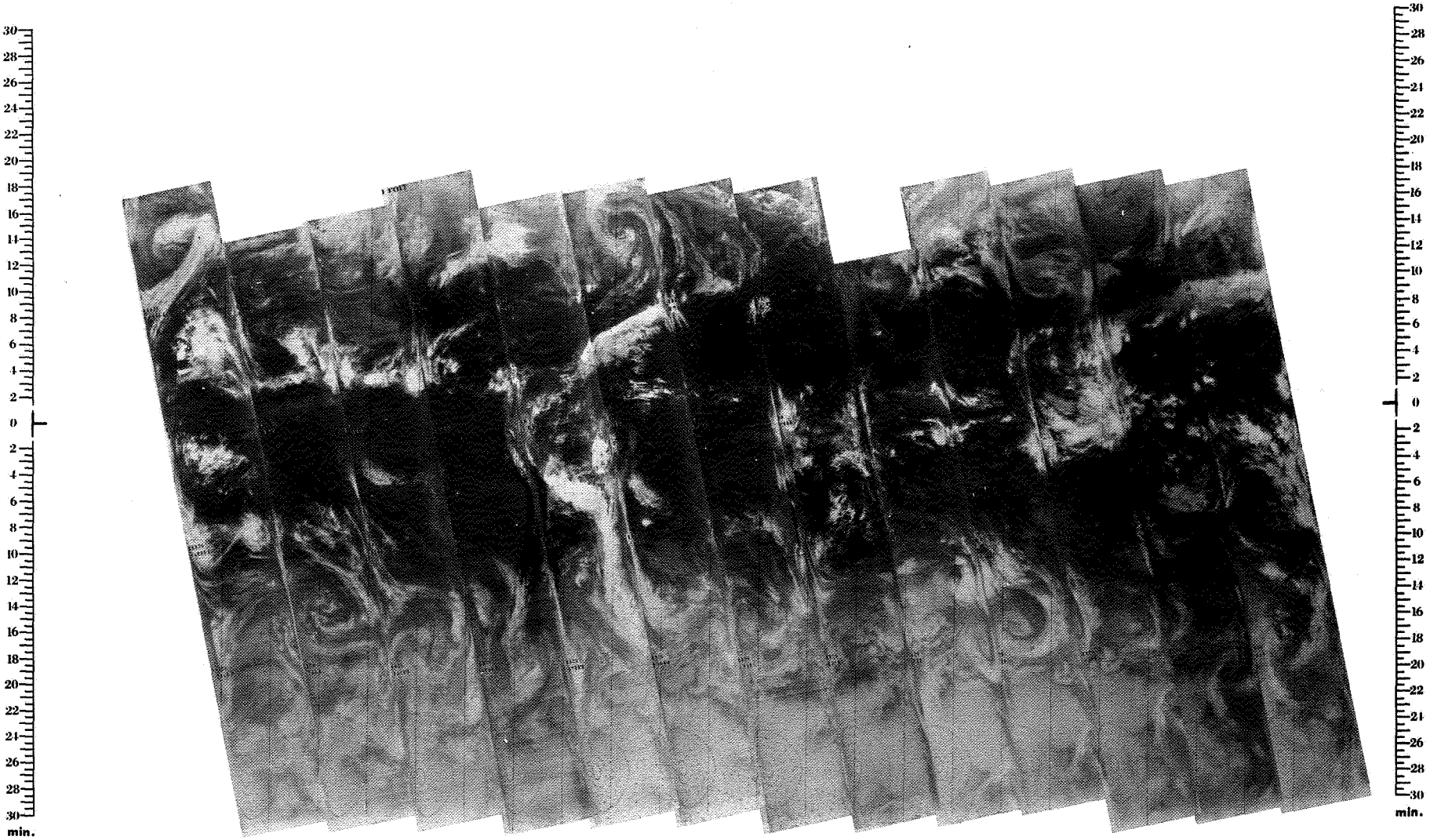
4654
4655
4656
4657
4658
4659
4660
4661
4662
4663
4664
4665
4666
4667
23 NOVEMBER 1973
11.5 μm
min.



4667 4666 4665 4664 4663 4662 4661 4660 4659 4658 4657 4656 4655 4654

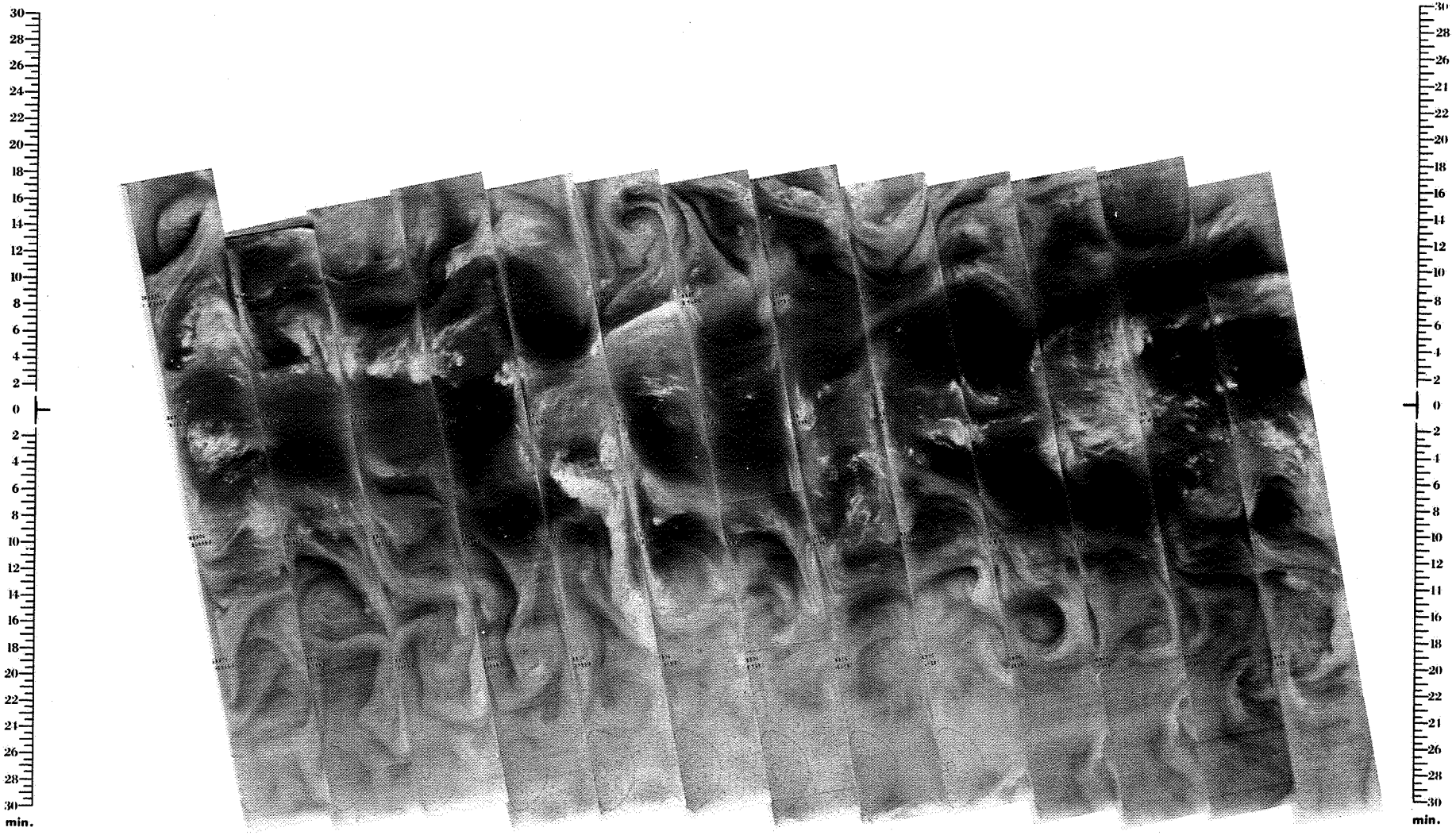
23 NOVEMBER 1973

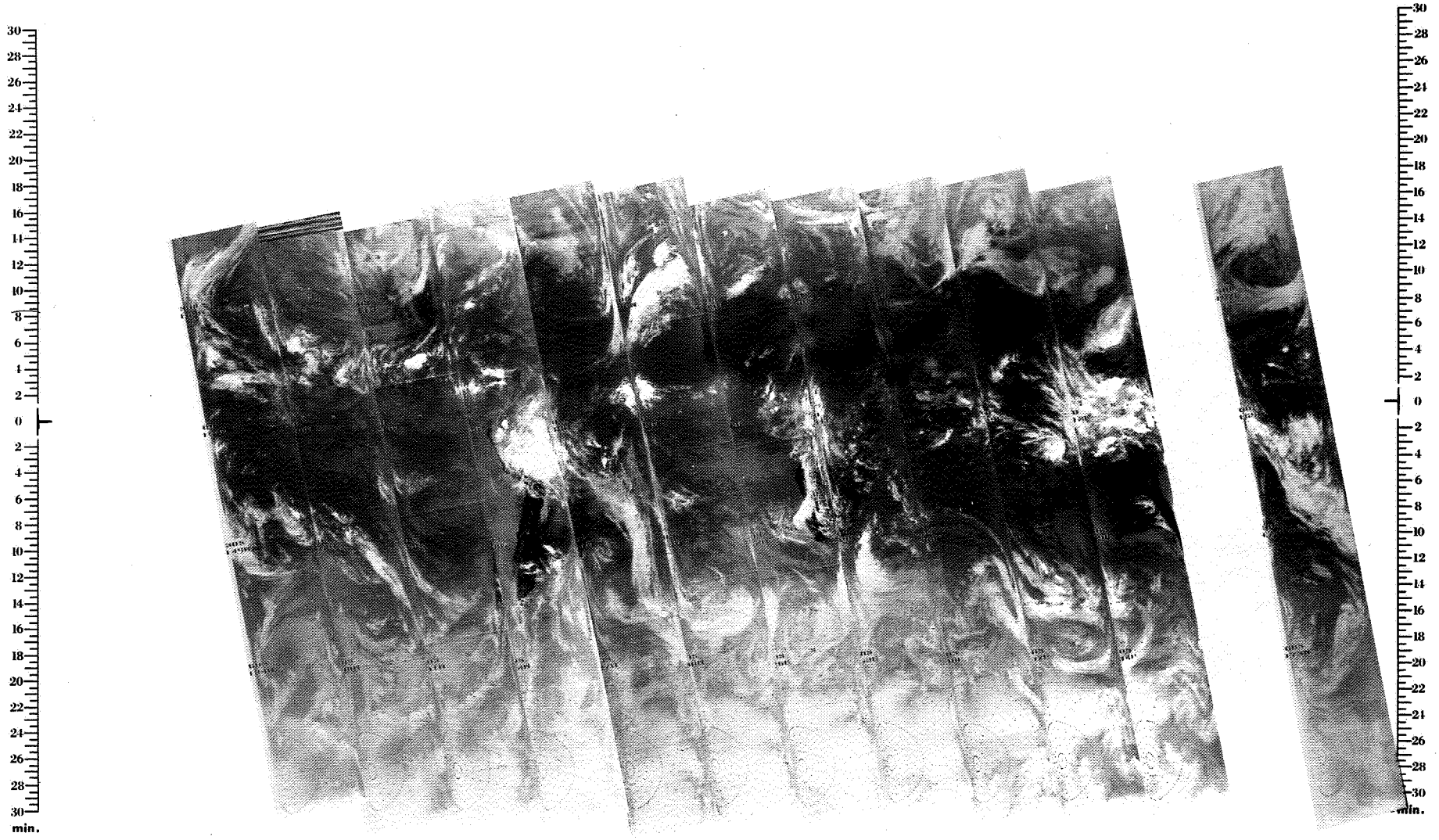
6.7 μm



24 NOVEMBER 1973

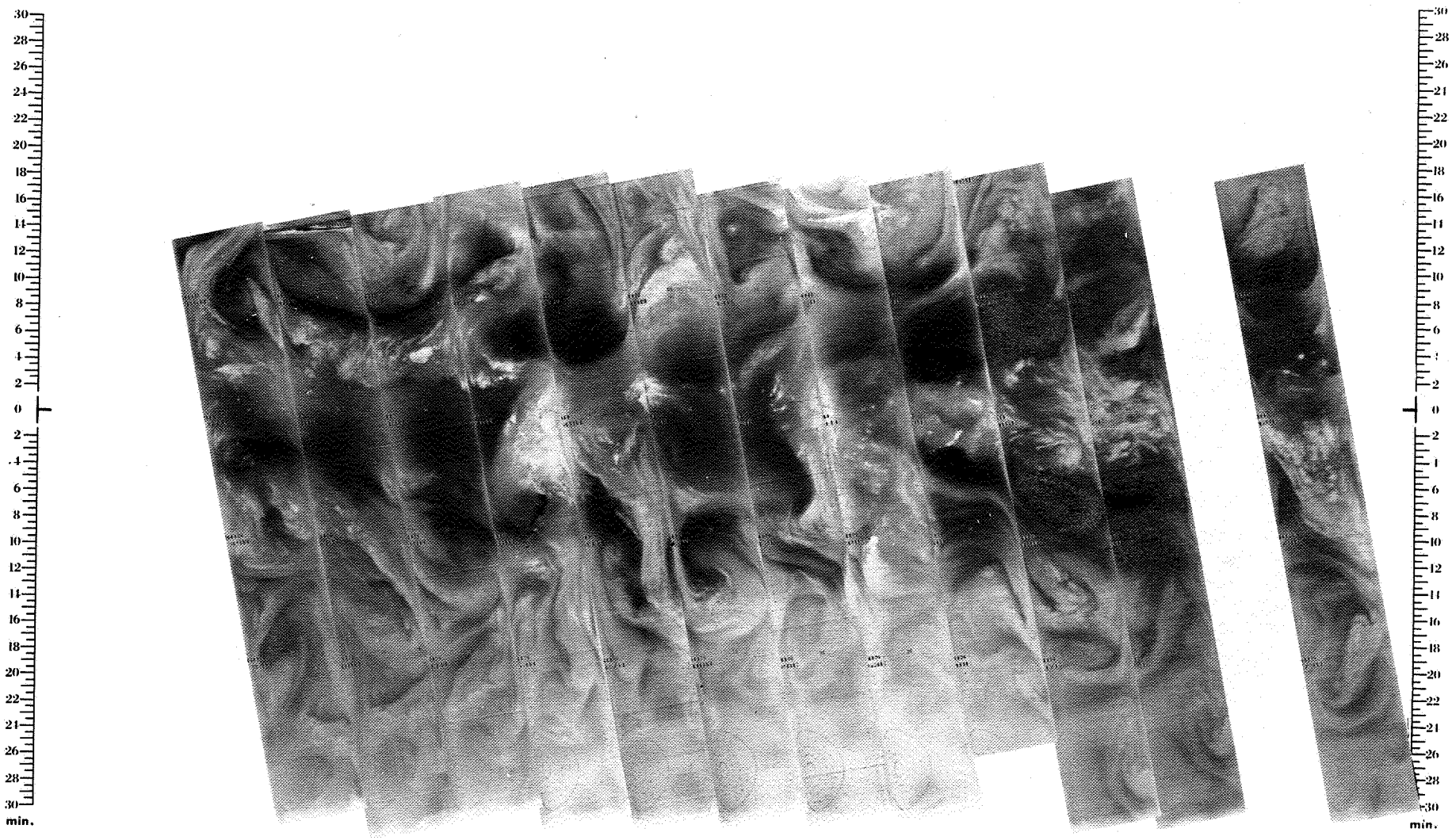
11.5 μm


30 28 26 24 22 20 18 16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
min.
4680 4679 4678 4677 4676 4675 4674 4673 4672 4671 4670 4669 4668
24 NOVEMBER 1973
6.7 μm



25 NOVEMBER 1973

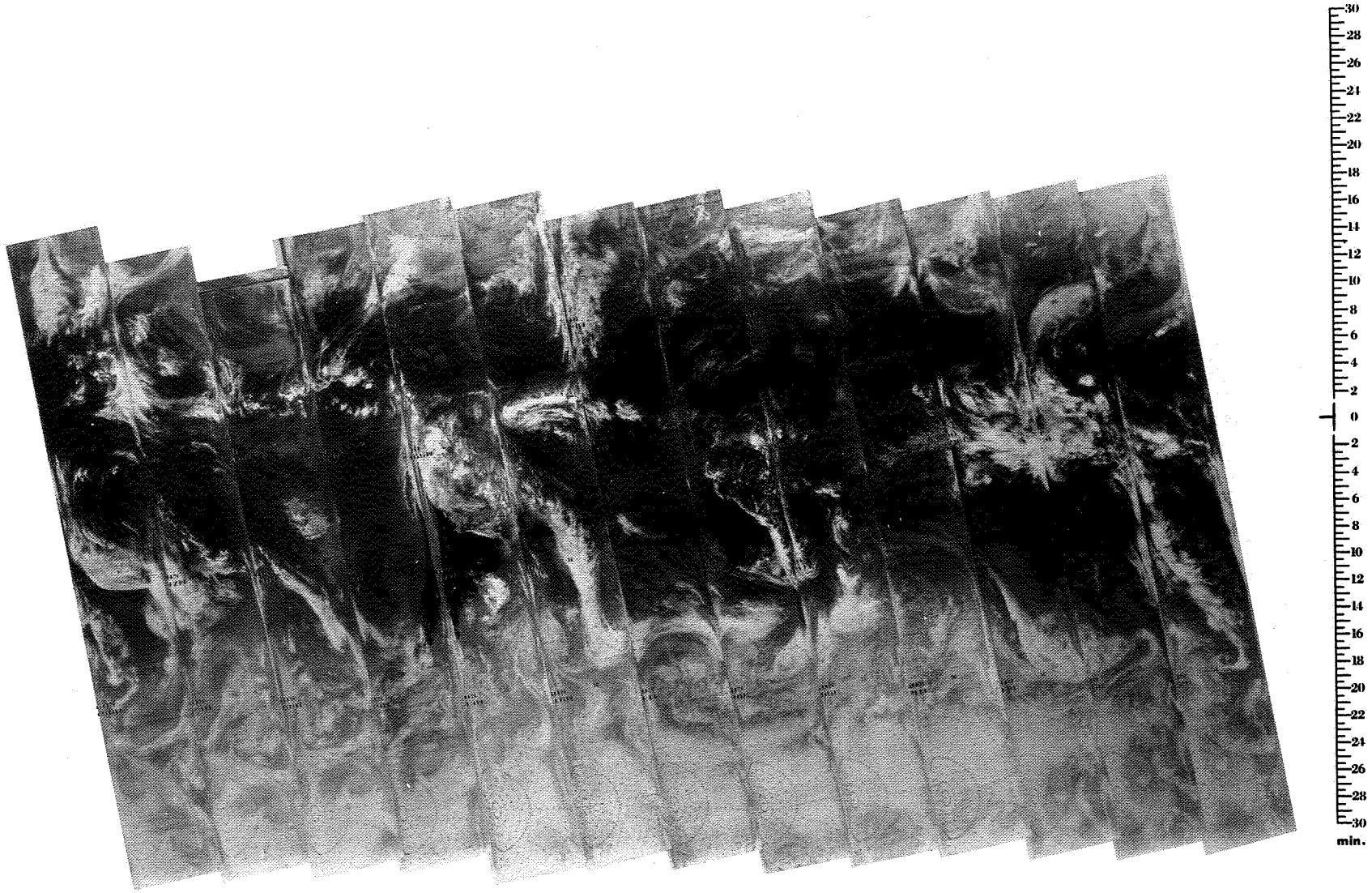
11.5 μm

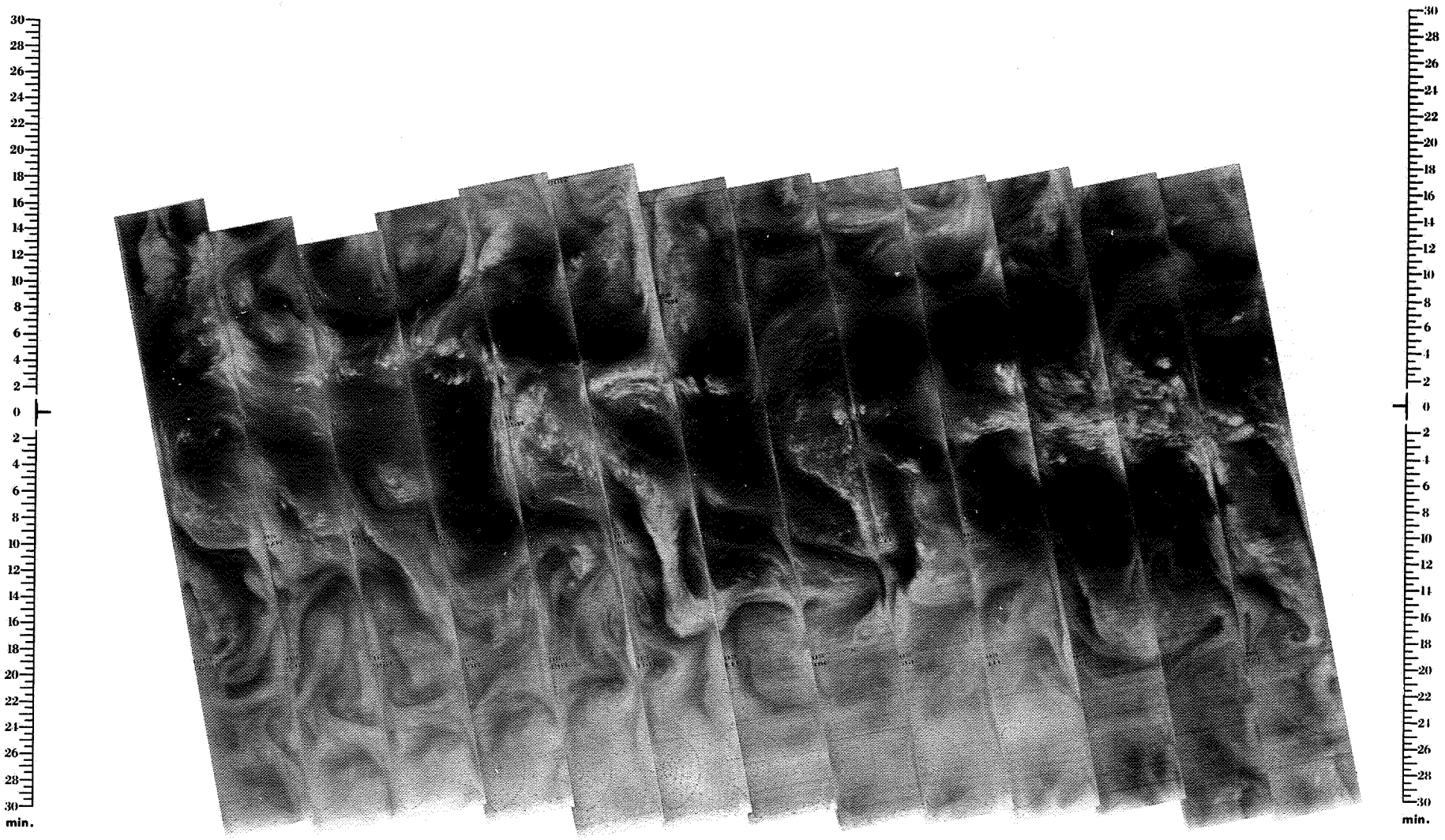


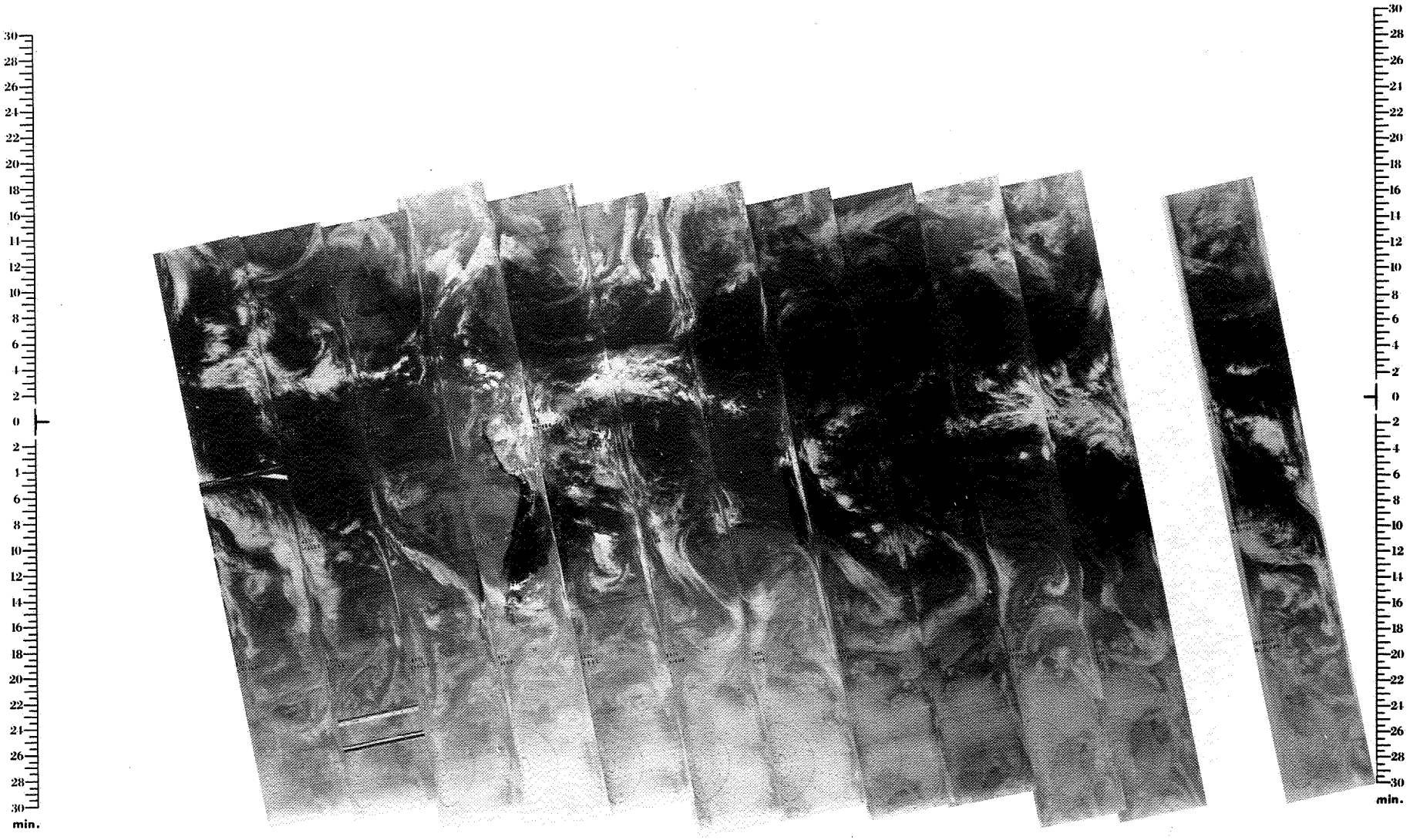
4694 4693 4692 4691 4690 4689 4688 4687 4686 4685 4684 4683 4682 4681

25 NOVEMBER 1973

6.7 μm

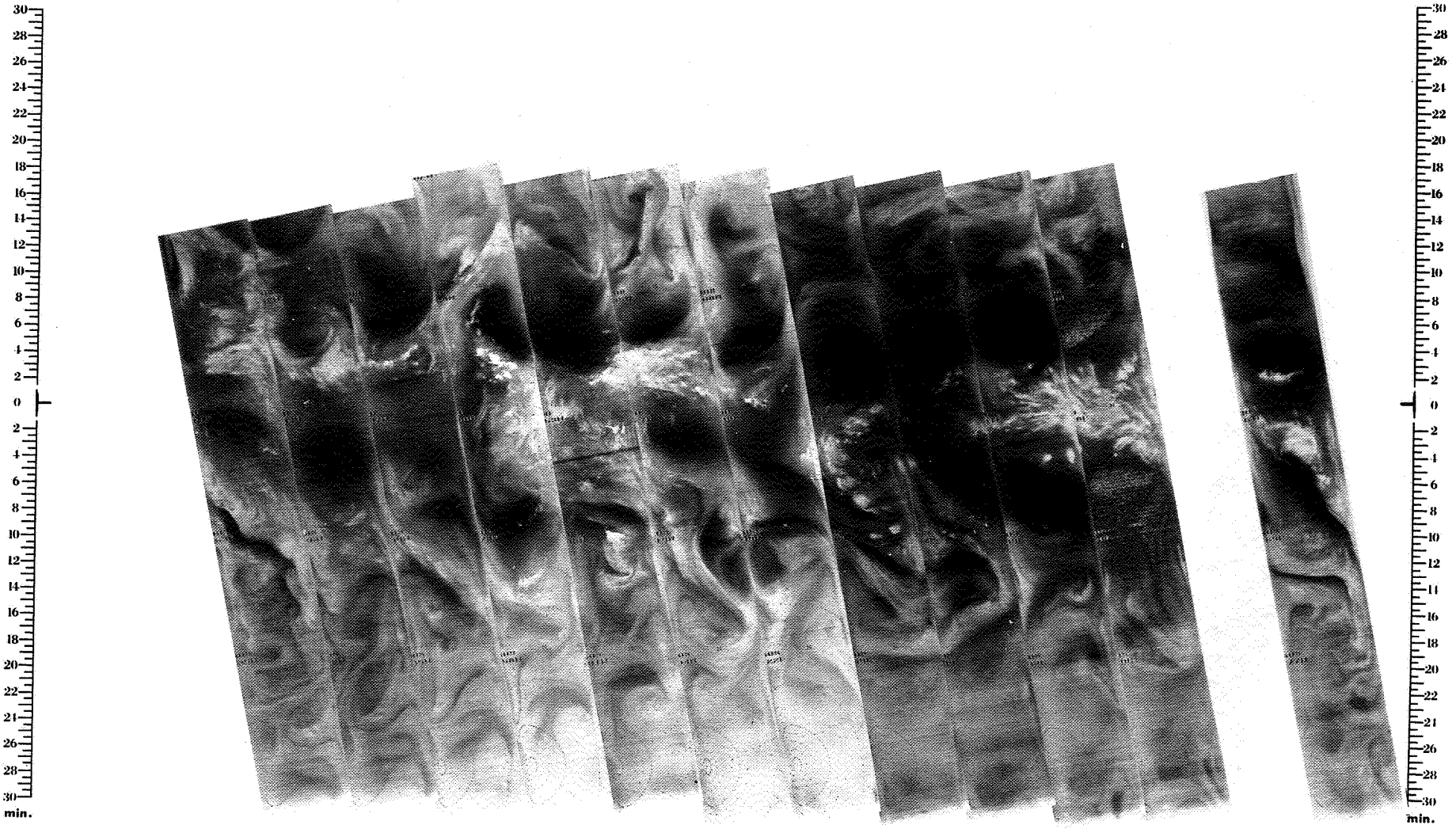

4707 4706 4705 4704 4703 4702 4701 4700 4699 4698 4697 4696 4695
26 NOVEMBER 1973
11.5 μm
min.
min.


min.
min.
4707 4706 4605 4704 4703 4702 4701 4700 4699 4698 4697 4696 4695
26 NOVEMBER 1973
6.7 μm



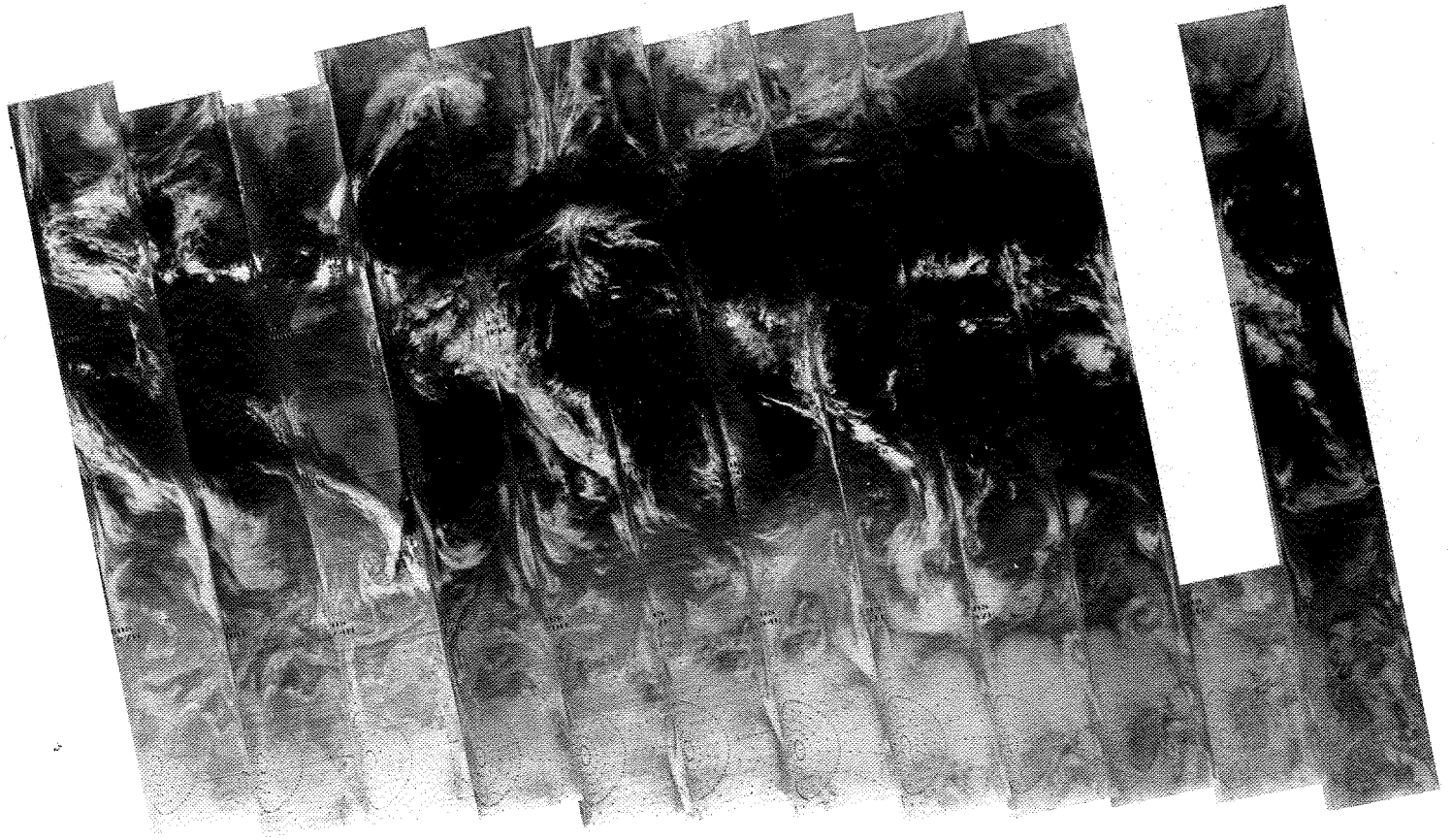
27 NOVEMBER 1973

11.5 μm



27 NOVEMBER 1973

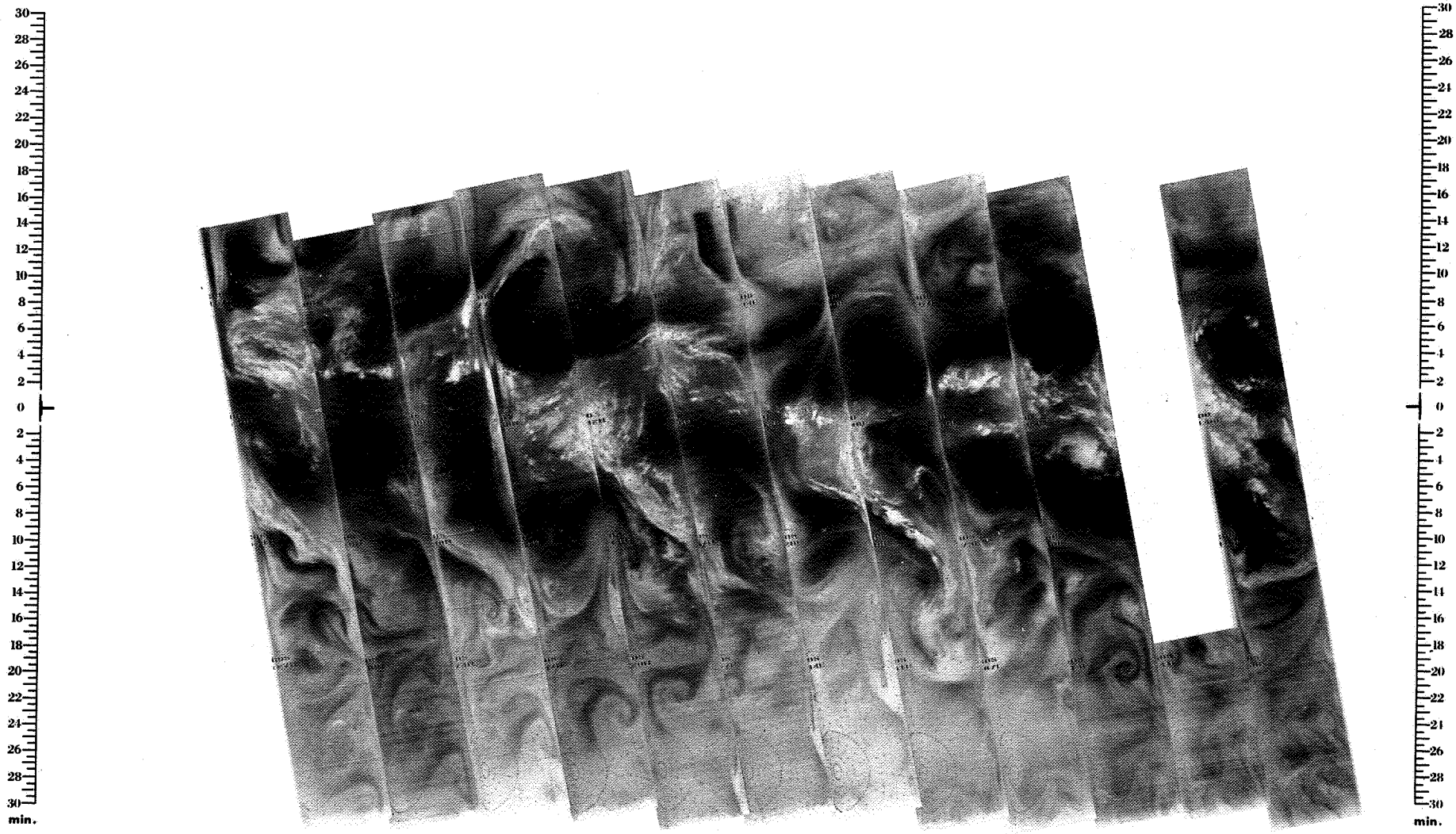
6.7 μm



4734 4733 4732 4731 4730 4729 4728 4727 4726 4725 4724 4723 4722

28 NOVEMBER 1973

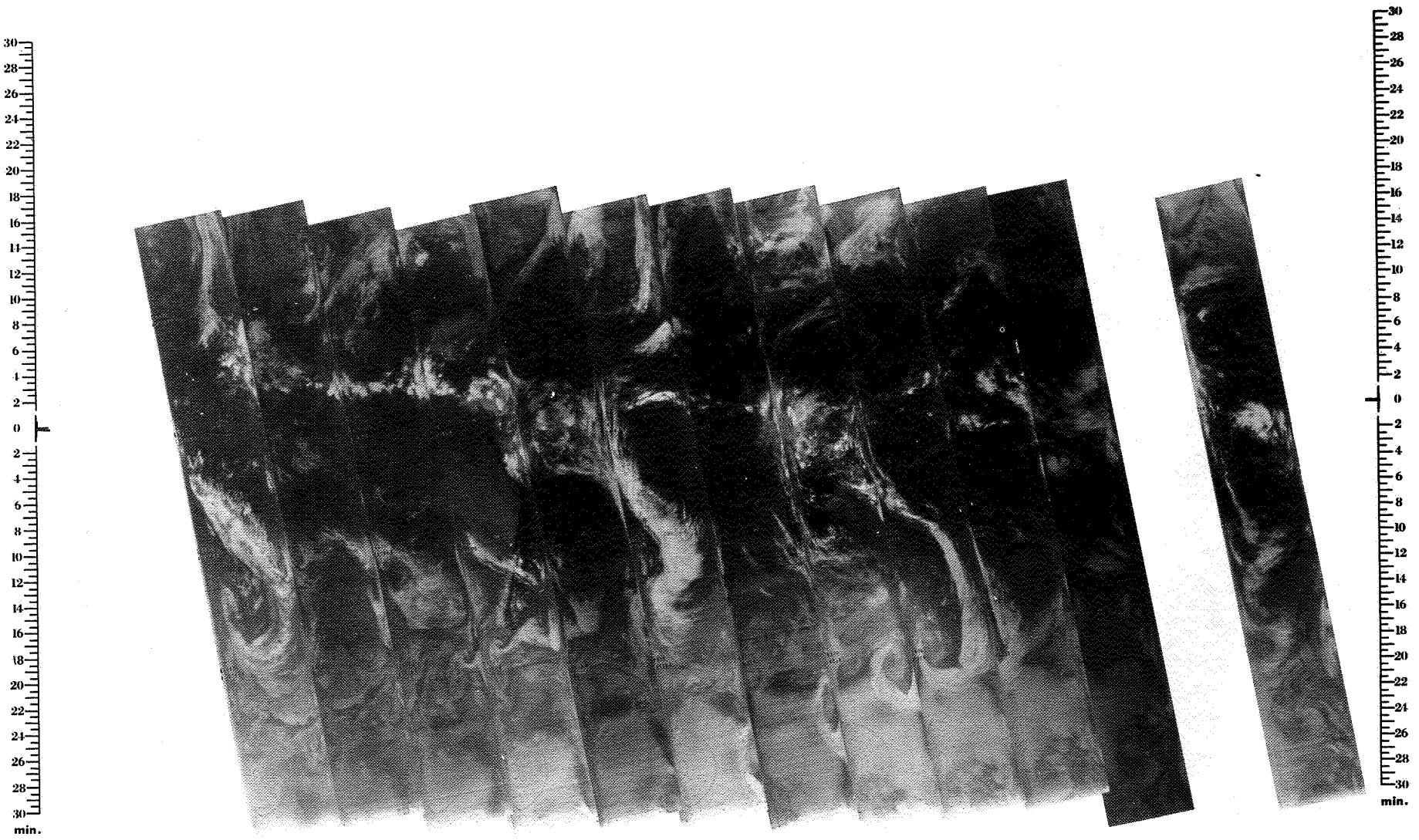
11.5 μm

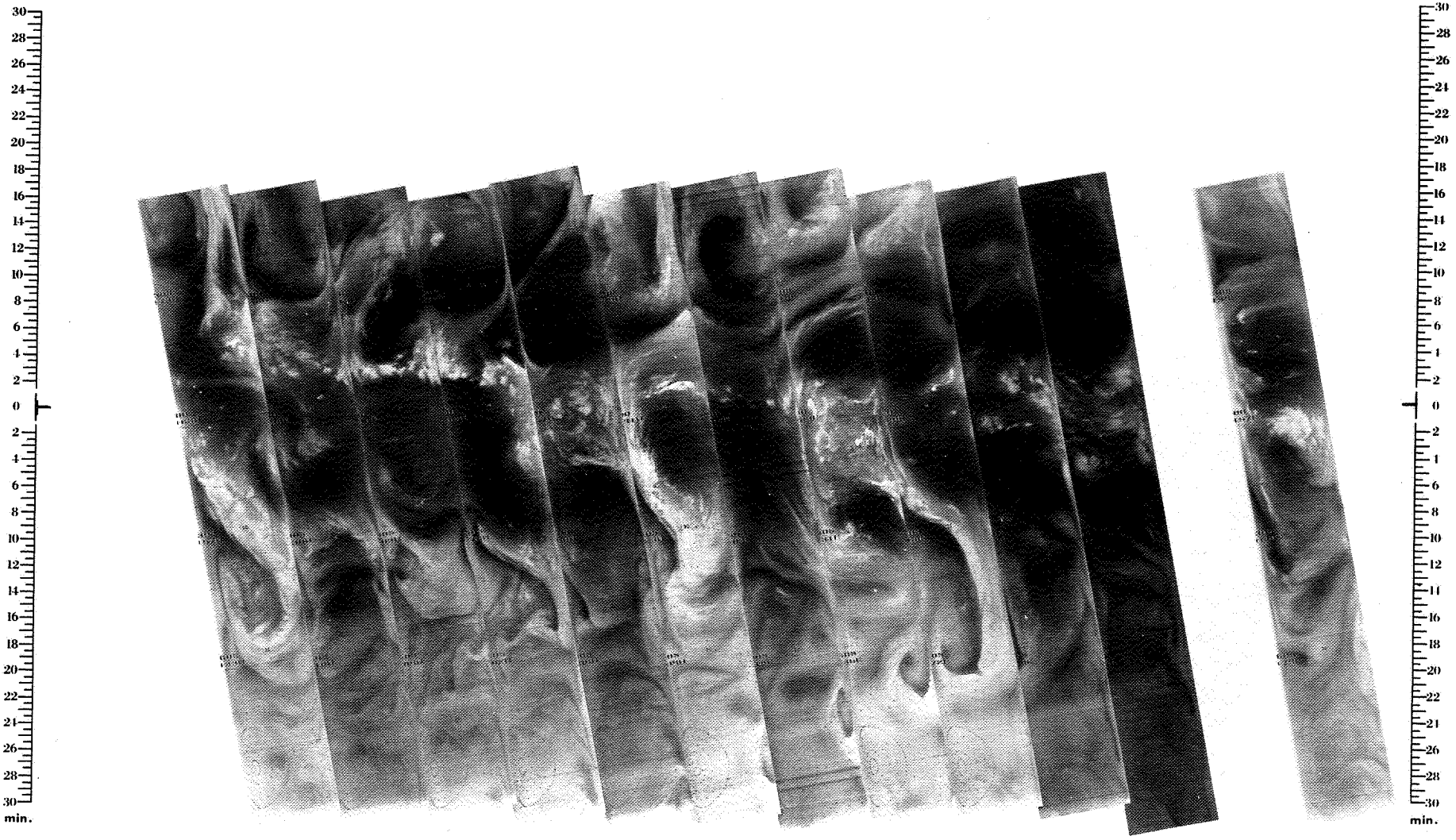


4734 4733 4732 4731 4730 4729 4728 4727 4726 4725 4724 4723 4722

28 NOVEMBER 1973

6.7 μm

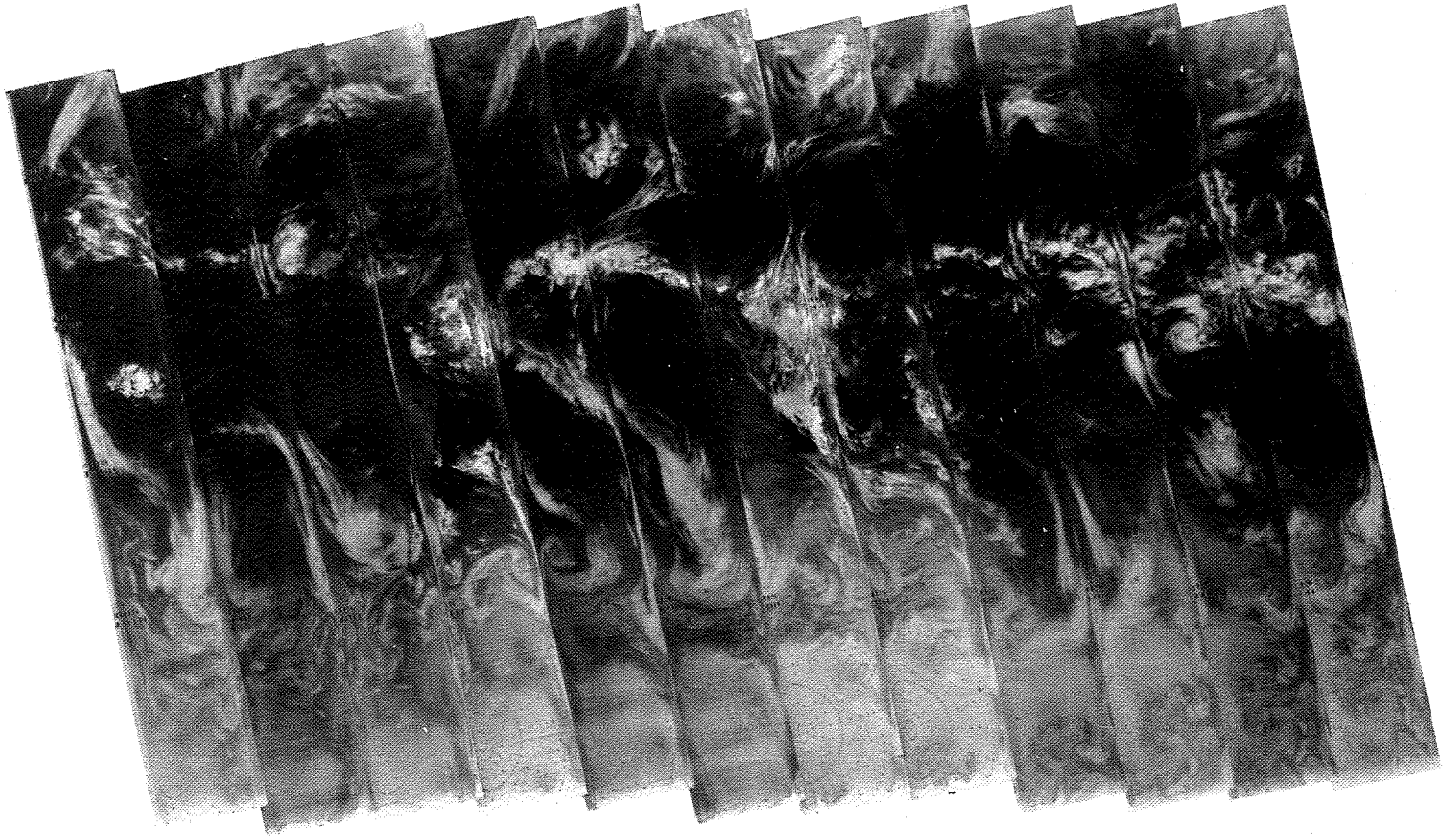

4747 4746 4745 4744 4743 4742 4741 4740 4739 4738 4737 4736 4735
29 NOVEMBER 1973
11.5 μm
min.
min.



4747 4746 4745 4744 4743 4742 4741 4740 4739 4738 4737 4736 4735

29 NOVEMBER 1973

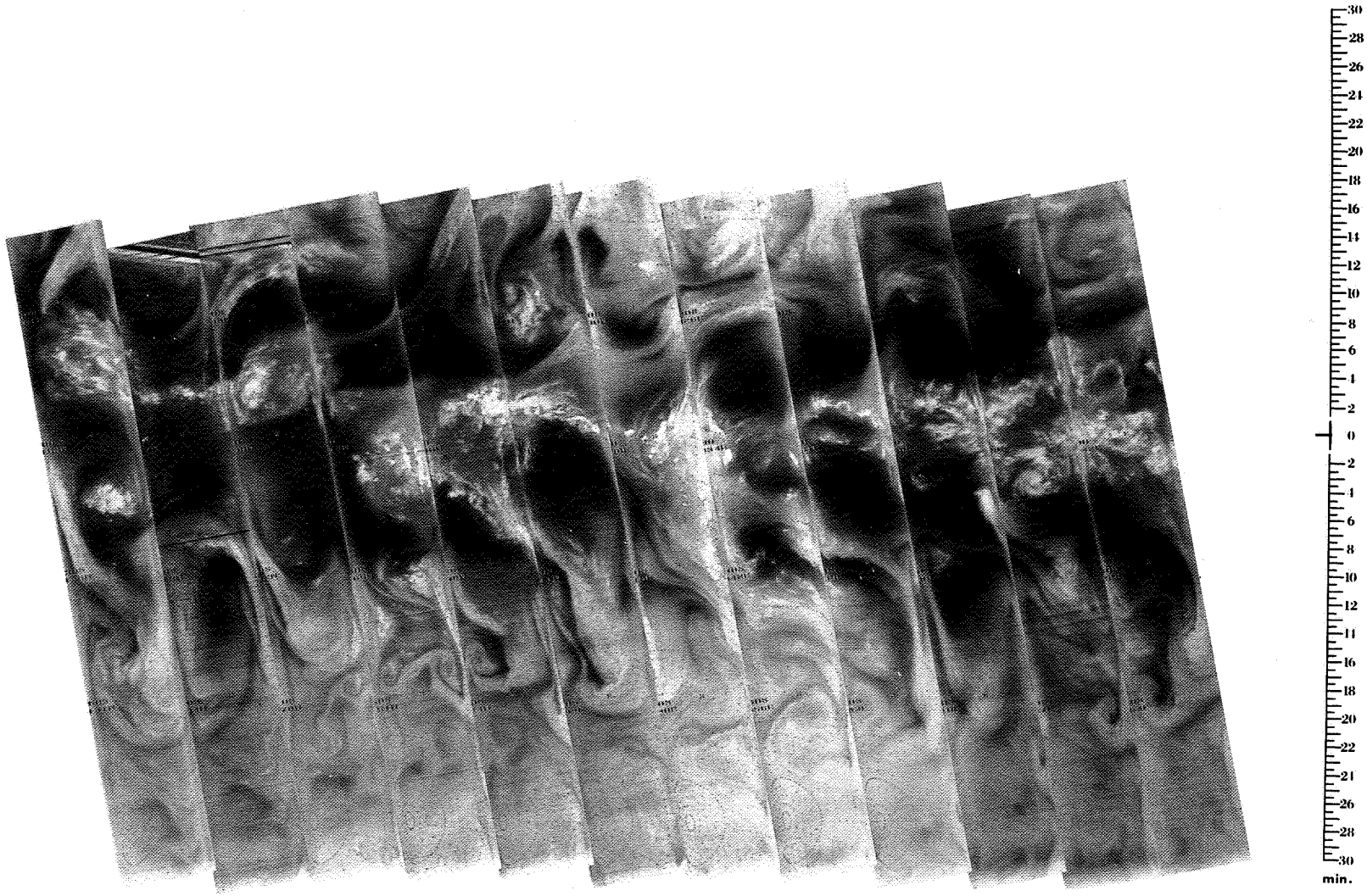
6.7 μm



4761 4760 4759 4758 4757 4756 4755 4754 4753 4752 4751 4750 4749 4748

30 NOVEMBER 1973

11.5 μm



4761 4760 4759 4758 4757 4756 4755 4754 4753 4752 4751 4750 4749 4748

30 NOVEMBER 1973

6.7 μm

SECTION 5

CORRECTIONS TO THE NIMBUS 5 USER'S GUIDE

This section presents all corrections or additions to The Nimbus 5 User's Guide which now are known to be necessary. If additional corrections are required, they will appear in a subsequent catalog. All previous corrections will be carried forward cumulatively into each new catalog.

5.1 THIR Corrections to the User's Guide

Table 5-1
(First presented in Volume 1)

This table replaces Table 2-3 (page 31) in The Nimbus 5 User's Guide.

Table 2-3

THIR Output Voltages Versus Equivalent Blackbody Temperatures at Different Bolometer Temperatures for the 11.5 μm Channel

		Bolometer Temperature (°C)				
		0	10	20	30	40
Blackbody Temperature (°K)	0*	-0.405	-0.407	-0.413	-0.421	-0.425
	180	-0.618	-0.617	-0.617	-0.617	-0.606
	190	-0.711	-0.709	-0.706	-0.702	-0.685
	200	-0.829	-0.825	-0.820	-0.811	-0.786
	210	-0.976	-0.970	-0.961	-0.946	-0.911
	220	-1.153	-1.144	-1.130	-1.109	-1.062
	230	-1.363	-1.351	-1.332	-1.302	-1.240
	240	-1.606	-1.591	-1.565	-1.526	-1.448
	250	-1.886	-1.867	-1.834	-1.783	-1.686
	260	-2.202	-2.178	-2.137	-2.074	-1.955
	270	-2.555	-2.526	-2.476	-2.399	-2.256
	280	-2.946	-2.911	-2.851	-2.759	-2.589
	290	-3.375	-3.334	-3.262	-3.153	-2.954
	300	-3.841	-3.793	-3.709	-3.582	-3.352
	310	-4.345	-4.289	-4.192	-4.045	-3.781
	320	-4.886	-4.822	-4.711	-4.543	-4.241
	330	-5.463	-5.391	-5.264	-5.074	-4.733

*Space level

Table 5-2
(First presented in Volume 1)

This table replaces Table 2-4 (page 32) in The Nimbus 5 User's Guide.

Table 2-4

THIR Output Voltages Versus Equivalent Blackbody Temperatures at Different Bolometer Temperatures for the 6.7μ m Channel

		Bolometer Temp. (°C)				
		0	10	20	30	40
Blackbody Temperature (°K)	0*	-0.507	-0.518	-0.532	-0.556	-0.576
	180	-0.607	-0.618	-0.632	-0.655	-0.674
	185	-0.644	-0.654	-0.669	-0.692	-0.710
	190	-0.692	-0.702	-0.716	-0.739	-0.756
	195	-0.752	-0.762	-0.776	-0.798	-0.814
	200	-0.827	-0.838	-0.851	-0.873	-0.888
	205	-0.921	-0.931	-0.944	-0.966	-0.978
	210	-1.035	-1.045	-1.058	-1.078	-1.089
	215	-1.172	-1.182	-1.195	-1.215	-1.223
	220	-1.337	-1.347	-1.359	-1.379	-1.383
	225	-1.533	-1.543	-1.554	-1.573	-1.573
	230	-1.764	-1.774	-1.784	-1.801	-1.797
	235	-2.033	-2.043	-2.052	-2.068	-2.059
	240	-2.350	-2.355	-2.363	-2.378	-2.362
	245	-2.704	-2.714	-2.721	-2.734	-2.711
	250	-3.115	-3.125	-3.131	-3.142	-3.111
	255	-3.582	-3.592	-3.597	-3.605	-3.565
	260	-4.110	-4.119	-4.122	-4.127	-4.077
	265	-4.704	-4.714	-4.715	-4.717	-4.656
	270	-5.367	-5.378	-5.376	-5.375	-5.300

*Space level

The following information supplements that in paragraph 2.4.1.2 (page 34) in The Nimbus 5 User's Guide. (First presented in volume 5.)

Beginning with orbit 3581 (4 September 1973), the ten-step gray scale will no longer be attached to each orbit of 70mm archival film. However, one gray scale will be attached at the beginning and end of each reel of archival film. A user who requests THIR imagery recorded after orbit 3581 will be furnished a gray scale wedge only if he specifically requests it.

5.2 SCMR Corrections to the User's Guide

There are no SCMR corrections to the User's Guide.

5.3 ESMR Corrections to the User's Guide (First presented in Volume 3)

The following information replaces the next to the last paragraph on page 103 (Section 4, 4.5) of The Nimbus 5 User's Guide.

ESMR grid print maps of calibrated brightness temperatures are available from NSSDC in three different map projections. These are: (1) Polar stereographic, (2) Mercator, and (3) Horizontal stereographic (Bull's-eye). Program options permit contouring of the grid print maps, printing of map titles, and using fewer than the full 78 beam positions.

For each map requested, the following information is needed:

- Satellite and sensor
  Nimbus 5 ESMR

- Map type
  1. Polar stereographic
  2. Mercator
  3. Horizontal stereographic (Bull's-eye)

- Map scale
  Scale of map in millions

- Geographic area
  1. For a Polar stereographic map specify - latitude of map perimeter, and orientation of 0° meridian line. The standard position for the 0° meridian on a northern hemisphere map is 10° clockwise below a left-right horizontal line through the map's pole.

     On a southern hemisphere map, 0° meridian is 10° counterclockwise below a left-right horizontal line through the map's pole. For other orientations of the 0° meridian, the user must specify, preferably with a sketch, the orientation desired.

  2. For a Mercator map specify - latitude of upper and lower edges of map, and longitudes of left and right edges of map. Longitudes are measured west from Greenwich (0°).

  3. For a Horizontal stereographic (Bull's-eye) map specify - latitude and longitude (west from Greenwich) of map center, pseudo co-latitude of

map perimeter (number of degrees of latitude from map center), and azimuth of 0° longitude line. If not specified, the azimuth will be located as it is for the Polar stereographic map.

- Calendar date of data requested
- Data orbit number(s)
- Beginning and end time (GMT) of the date for each map requested. These times are derived from information in Table 2-2 of each Nimbus 5 Data Catalog.

Optional specifications for each map are the following:

- ESMR beam parameters
  The user can specify, or limit, the range of beam positions used to produce each map. If no specifications are made, beam positions 1 through 78 are used.
- Map title
  For each map, the user may specify a title containing up to 70 characters.
- Contouring
  Normally, maps are printed without contours. To obtain contoured maps, the user must specify a contour base (or lower temperature limit e.g., 130°K) and a contouring interval (e.g., contour every 10° K). The contour program fills in the first contour interval above the contour base with the letter "A", the next interval is blank, the next is filled in with the letter "B", etc.

(The following was first presented in Volume 2.)

Table 4-4 of The Nimbus 5 User's Guide will not be supplied. Table 5-3, is to be used in its place.

As stated in The Nimbus 5 Data Catalog, vol. 1, the antenna properties changed after final calibration and rendered those numbers useless. The cause of the gross variations in antenna properties which were observed soon after launch has been determined to be a cross-polarized grating lobe. This finding has been confirmed through measurements on the engineering model and on the proto/flight model of the ESMR, and through theoretical calculations. The problem does not exist for the near-nadir beam positions, so those positions are unaffected. A quantitative discussion of this problem is included in the report of the Nimbus 5 ESMR Anomaly Review Committee.

Table 5-3

Constants for Linear Correction of Brightness Temperatures Corresponding to ESMR Beam Positions

Beam Position	A	B(°K)
1	1.058	4
2	1.027	10
3	.990	16
4	.980	14
5	.963	17
6	.987	15
7	.970	17
8	.961	19
9	.969	18
10	.980	16
11	.980	17
12	1.018	10
13	.999	12
14	.989	13
15	.975	15
16	.974	15
17	.994	10
18	1.026	8
19	1.038	5
20	1.018	13
21	1.034	13
22	1.099	4
23	1.082	9
24	1.048	8
25	.986	12
26	.960	10
27	.941	11
28	.947	10
29	.937	11
30	.942	10
31	.963	6
32	1.003	-3
33	1.002	-3
34	.976	1
35	.988	-1
36	1.004	0
37-42	1.000	0
43	1.002	-3

Table 5-3 (Continued)

Constants for Linear Correction of Brightness Temperatures Corresponding to ESMR Beam Positions

Beam Position	A	B(°K)
44	.962	4
45	.960	4
46	.980	2
47	.966	4
48	.966	6
49	.948	10
50	.949	10
51	.934	12
52	.945	13
53	.988	11
54	1.019	11
55	1.041	11
56	1.049	14
57	1.042	15
58	1.019	16
59	1.015	15
60	1.012	12
61	.993	13
62	.976	15
63	.998	12
64	.983	14
65	.998	14
66	.970	19
67	.982	18
68	.980	19
69	.955	24
70	.974	22
71	.941	26
72	.969	22
73	.949	30
74	.967	22
75	.956	27
76	.959	28
77	.969	26
78	1.030	13

An empirical calibration has been developed which removes the effect of the lobe structure and antenna loss, which vary with position, and roughly corrects for angular variations in viewing geometry. In this calibration scheme the antenna loss ratio is assumed to be 1.56 for all temperatures and beam positions, and a linear correction is applied to the data. The correction is given by:

$$T_i' = A_i T_i + B_i$$

where T_i' is the corrected brightness temperature for the i-th beam position and T_i is the brightness temperature calculated with the assumption of a constant antenna loss. A_i and B_i are empirically derived constants given in Table 5-3.

5.4 ITPR Corrections to the User's Guide

The following tables replace Table 5-3 of The Nimbus 5 User's Guide.

Table 5-4
(First presented in volume 1)

ITPR Calibration Constants for the Period 12/12/72 - 2/6/73

$R_s = a_0 + a_1 V$

R_s = radiance of the scene (mw/m^2 ster cm^{-1})

V = digital counts

Channel	a_0*	a_1
1	1.0495	-0.001773
2	141.78	-0.1813
3	166.93	-0.2046
4	173.02	-0.2065
5	174.02	-0.1940
6	174.99	-0.1977
7	170.18	-0.1995

*The calibration constant a_0 now includes the radiance of the chopper reference blackbody.

Table 5-5
(First presented in volume 2)

ITPR Calibration Constants for the Period 2/7/73 - 3/31/73

$R_s = a_0 + a_1 V$

R_s = radiance of the scene (mw/m^2 ster cm^{-1})

V = digital counts

Channel	a_0*	a_1
1	1.061	-0.001782
2	141.775	-0.1801
3	166.840	-0.2037
4	172.974	-0.2054
5	174.034	-0.1931
6	175.040	-0.1963
7	170.288	-0.1988

*The calibration constant a_0 now includes the radiance of the chopper reference blackbody.

Table 5-6
(First presented in volume 3)

ITPR Calibration Constants for the Period 4/1/73 - 5/31/73

$R_s = a_0 + a_1 V$

R_s = radiance of the scene (mw/m^2 ster cm^{-1})

V = digital counts

Channel	a_0*	a_1
1	1.056	-0.001783
2	141.6	-0.1815
3	166.8	-0.2057
4	173.0	-0.2068
5	174.0	-0.1946
6	174.9	-0.1976
7	170.1	-0.1987

*The calibration constant a_0 now includes the radiance of the chopper reference blackbody.

Table 5-7
(First presented in volume 4)

ITPR Calibration Constants for the Period 6/1/73 - 7/31/73

$R_s = a_0 + a_1 V$

R_s = radiance of the scene (mw/m^2 ster cm^{-1})

V = digital counts

Channel	a_0*	a_1
1	1.049	-0.001758
2	141.8	-0.1820
3	166.8	-0.2061
4	173.1	-0.2072
5	174.1	-0.1954
6	175.2	-0.1982
7	170.3	-0.1985

*The calibration constant a_0 now includes the radiance of the chopper reference blackbody.

The following are changes to the ITPR material in Section 5 of The Nimbus 5 User's Guide: (First presented in Volume 2)

- The table, Nimbus 5 Compacted Data Format, at the bottom of page 125 should read:

Word	Format	Description
1	I	GMT (seconds)
2	Spec 1	Julian Day and Year
3 - 162	Spec 2 (F1, F3)	Calibrated IR Data
163 - 182	F1	Latitude
183 - 202	F1	Longitude
203 - 222	F1	Zenith
223	I	Grid Type (0 = Nadir) (1, 2, or 3 = Scan)
224 - 225	-	Zero Fill

- On page 126 in the paragraph describing Spec 2, the last two lines of that paragraph should read:

". . . 4-word pattern will be repeated thru word 162, resulting in 40 sets of IR measurements."

- The next paragraph (on page 126, after description of Spec 2) should read:

  "Each data record will contain 5 major frames of data (225 24-bit words for each major frame) with a total of 1125 24-bit words, or 450 60-bit words. Because major frames will contain either 34, 36 or 40 earth views for each channel, there will be zero fill in the IR data words when 34 or 36 views are present, and the corresponding latitudes and longitudes will be fictitious. This applies also to data samples which occur during retrace. Zero fill will be used to produce the constant-length record when the number of major frames in a day is not a multiple of 5."

- In the next paragraph the following changes should be made:

  Line 1: ". . . with a density of 556 6-bit bytes. . ."
  should read: ". . . with a density of 800 6-bit bytes. . ."

  Line 3: ". . .per day at 320 major frames. . .about 640 records"
  should read: ". . .per day at 400 major frames. . .about 960 records"

  Line 4: ". . . will contain about 5 days. . ."
  should read: ". . . will contain about 4 days. . ."

5.5 SCR Corrections to the User's Guide

The following information supplements the SCR information in the User's Guide and has been derived from post-launch information. (First presented in volume 3)

The filters of the A and B channels have minor leaks at short wavelengths. Corrections for these leaks are made using the radiance measured by channel C4 (11.5 μm window channel) in the equation,

$$R_i' = R_i (1 + \gamma_i) - a_i \gamma_i C_4 ,$$

where R_i is the measured channel i Radiance and R_i is the corrected radiance. Table 5-7 gives values of γ and $a\gamma$ for the A channels and channel B4. Corrections are of order 1-2 radiance units (mw/m^2 ster cm^{-1}) for the A channels. This is small compared with typical measured radiances of 80 units, but still 5-10 times larger than the rms noise. The correction to B4 is normally about 5 radiance units.

The B difference channels are not affected by leaks since the differencing operation causes the leaks to cancel exactly. The equation

$$R_{ij} = R_i + (R_i - R_j)\beta_{ij},$$

where R_{ij} is the calculated channel B_{ij} radiance and R_i is the measured channel Bi radiance, is used to derive the B difference channel radiances (B12, B23, and B34) from the measured B channel radiances (B1, B2, B3, and B4). Table 5-8 gives the coefficients β_{ij}.

Table 5-8

Correction Coefficients γ and $a\gamma$ for the SCR Temperature Sounding Channels

Channel	γ	$a\gamma$
A1	.0305	.015
A2	.0235	.0105
A3	.0146	.0057
A4	.0595	.025
B4	.153	.0165

Table 5-9

SCR B Difference Channel Coefficients β

Channel	β
B12	9.50
B23	10.05
B34	4.83

Figure 5-1 gives the experimenter's current best estimates of the weighting functions of the A channels and B4, when corrected as above, and of the B difference channels. These channels measure emission from carbon dioxide in the ν_2 band near 15 μm. The weighting functions were derived for a climatological mean temperature profile and, to a good approximation, are independent of temperature profile for the range of temperature which occurs in the atmosphere. These weighting functions are a compromise between theoretical computations, using spectral line parameters together with measured filter transmission profiles, and pre-launch test results for the flight instrument. This method is similar to that used for the Nimbus 4 SCR and was described in more detail by Barnett et al (1972).

5.6 NEMS Corrections to the User's Guide

There are no NEMS corrections to the User's Guide.

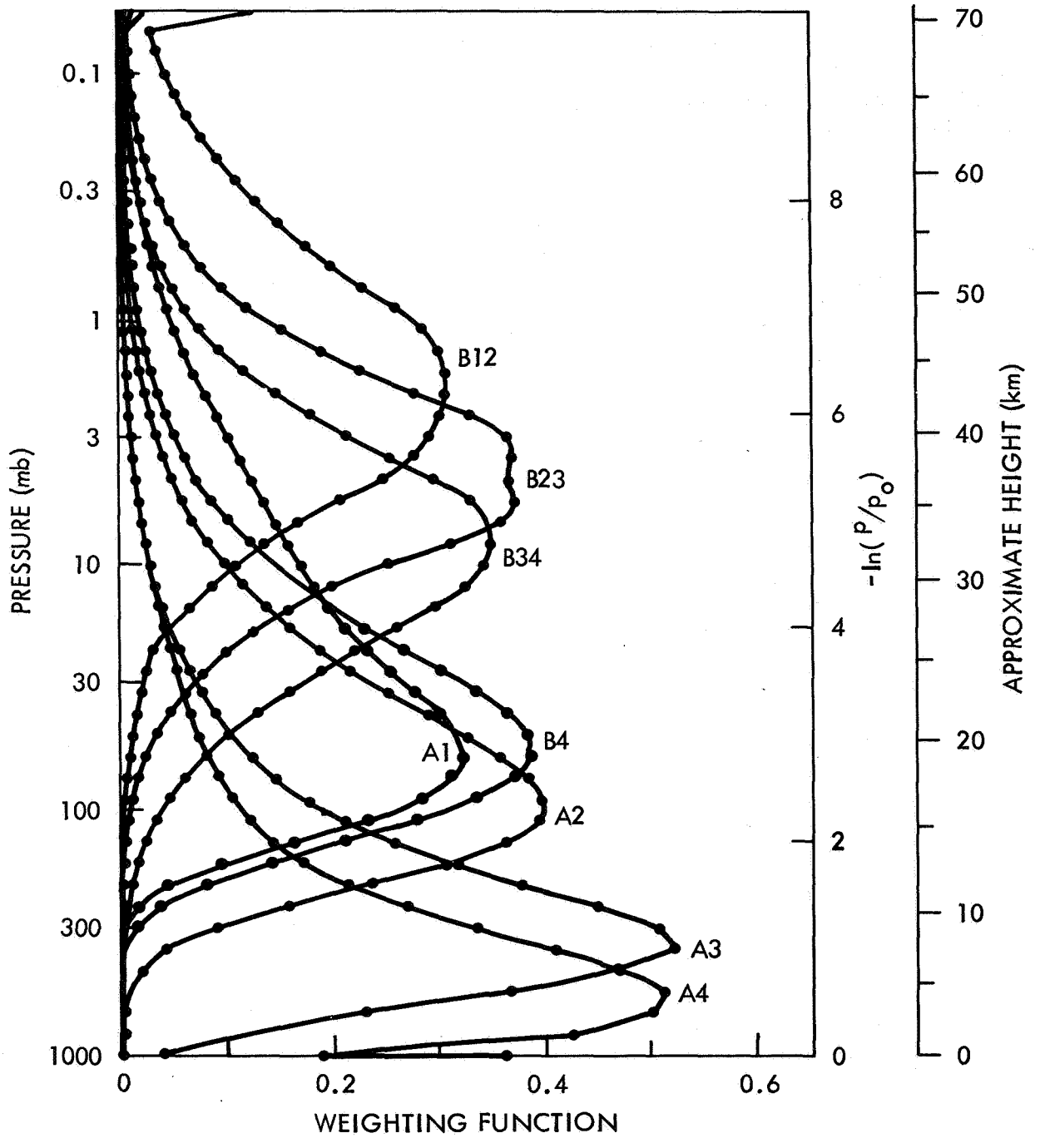
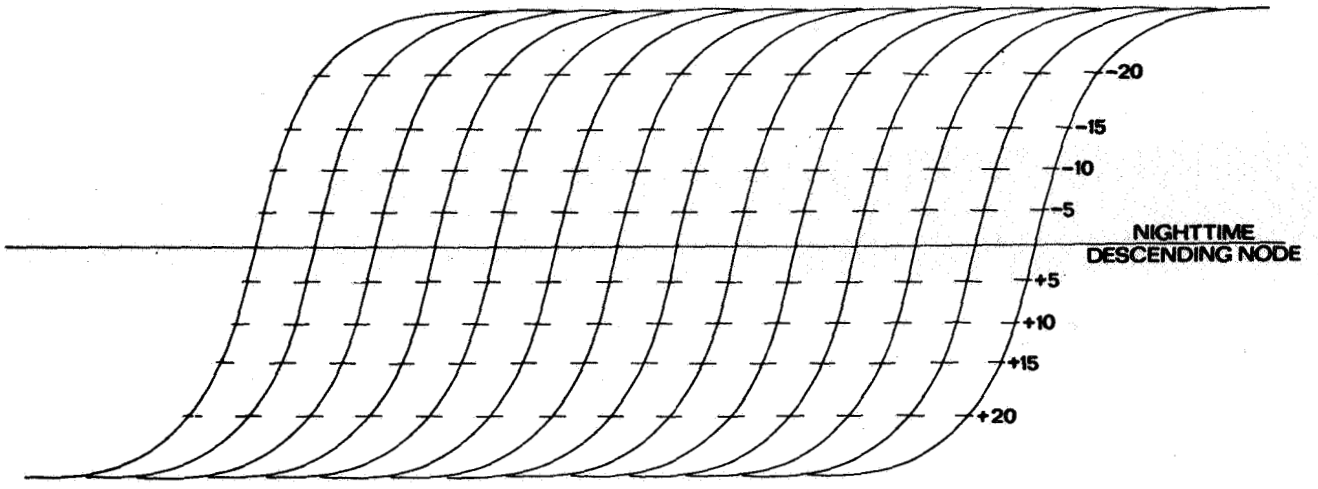
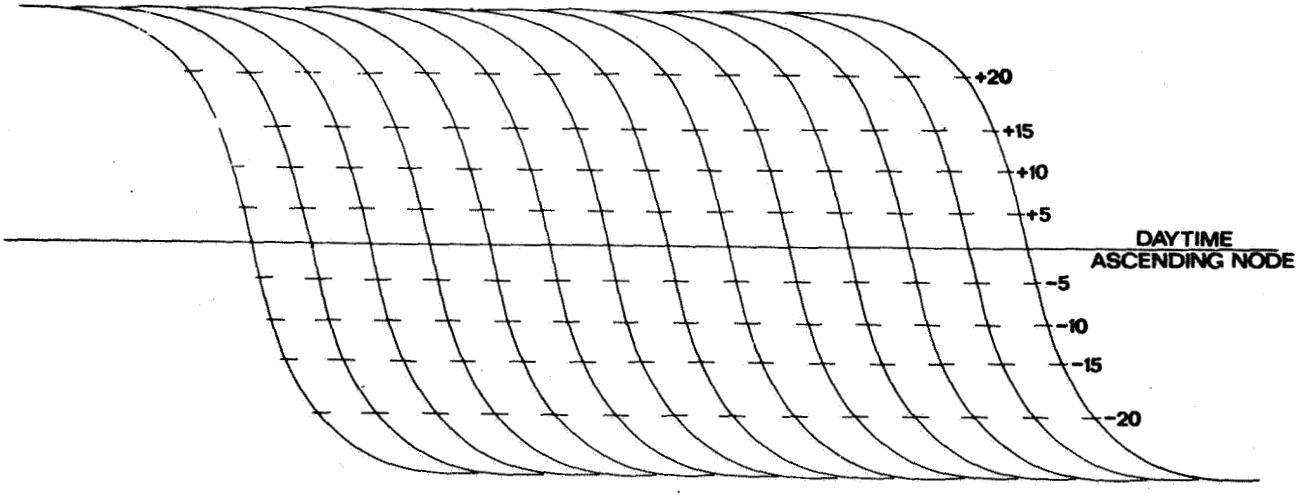


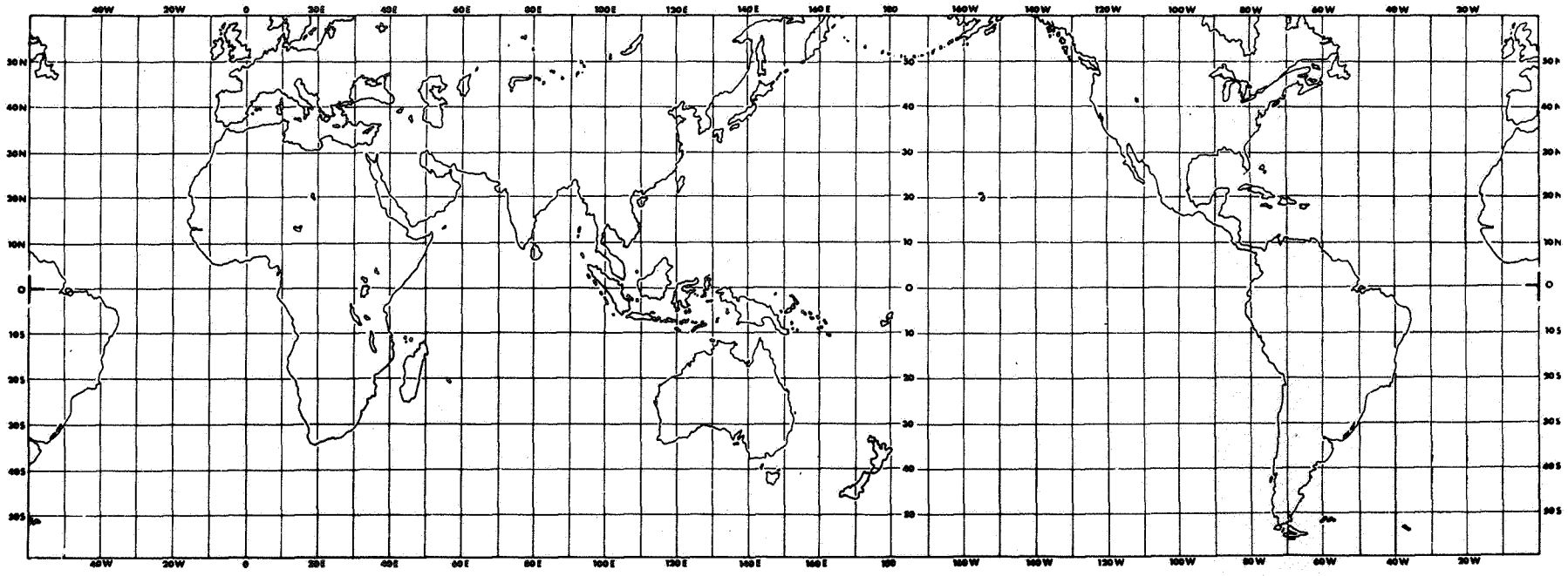
Figure 5-1. Weighting Functions of the Temperature Sounding Channels of the Nimbus 5 SCR. The height scale is approximate. The abscissa is a weighting function on an arbitrary scale.



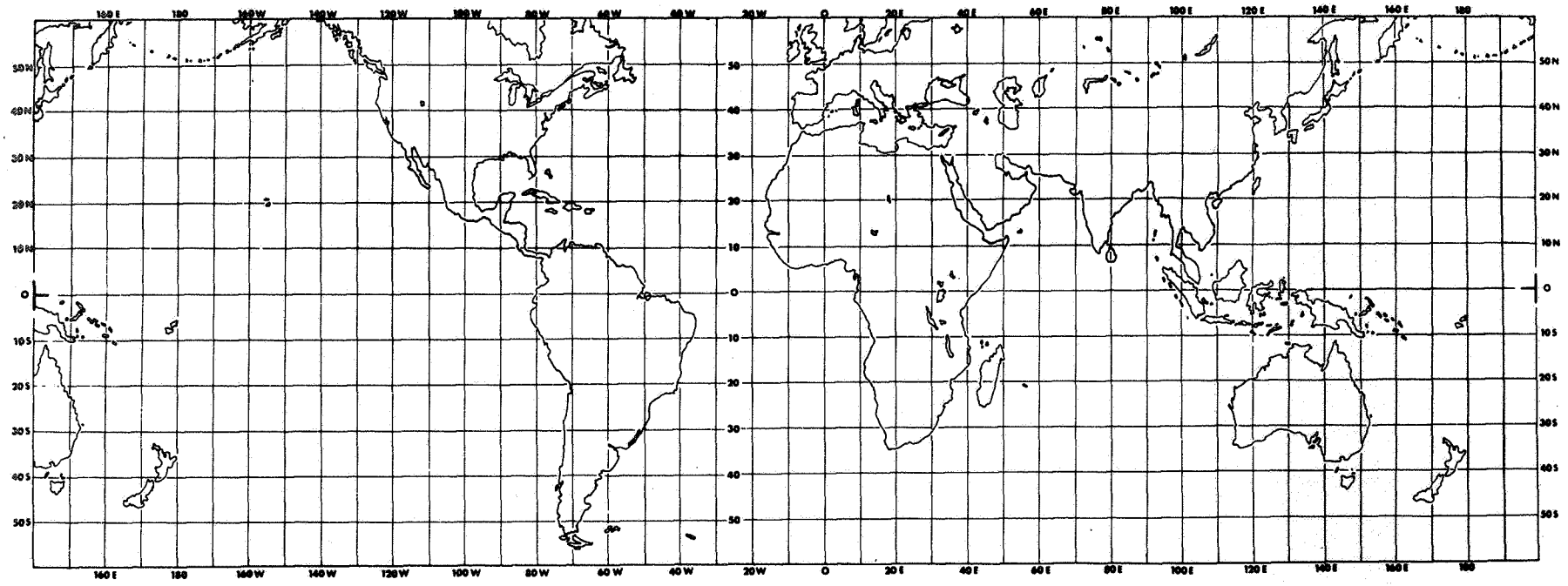
NIMBUS SUBSATELLITE TRACKS OVERLAY



NIMBUS SUBSATELLITE TRACKS OVERLAY



Location Guide
Average Scale for Nimbus
THIR Nighttime Montages



Location Guide
Average Scale for Nimbus
THIR Daytime Montages